

AIR POLLUTION—1970

Part 5

HEARINGS
BEFORE THE
SUBCOMMITTEE ON
AIR AND WATER POLLUTION
OF THE
COMMITTEE ON PUBLIC WORKS
UNITED STATES SENATE
NINETY-FIRST CONGRESS
SECOND SESSION
ON
S. 3229, S. 3466, S. 3546

APPENDIX

Printed for the use of the Committee on Public Works

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(II)

CONTENTS

STATEMENTS

Committee print No. 1, August 25, 1970, bill reported by Subcommittee on Air and Water Pollution.....	Page V
Air Transport Industry.....	1571
Air transport industry objections to sections 111 and 112 of S. 3229, as amended.....	1571
Effect of section 111.....	1571
Effect of section 112.....	1571
Conclusion.....	1572
American Federation of Labor-Congress of Industrial Organizations (AFL-CIO).....	1573
American Mining Congress.....	1574
Proposed section 109(b)(1).....	1574
Proposed section 112(2)(B).....	1574
Proposed subsection 111(a)(2)(K).....	1574
Proposed section 113.....	1575
Proposed section 114.....	1575
Proposed section 304—Citizen Suits.....	1575
Section 306.....	1575
Automobile Manufacturers Association.....	1576
Letter dated August 27, 1970, to Senator Muskie.....	1576
Letter dated August 27, 1970, to Hon. Elliot Richardson, Secretary of Health, Education, and Welfare.....	1576
Proposed revised section 202(e)(1), first version.....	1578
Proposed revised section 202(e)(1), second version.....	1578
Memorandum: Section 202(e)(1).....	1578
Memorandum: Section 206 Certification.....	1579
Section 207 Warranty of lifetime performance and recall and replacement for failure of lifetime performance.....	1579
Citizen suits.....	1582
Federal preemption.....	1583
Collier, Shannon, Rill & Edwards.....	1585
Memorandum of Law: Re summary analysis of citizen suit provisions of National Air Quality Standards Act of 1970 (§ 304).....	1585
I. Class actions.....	1585
II. Nature of actions which may be initiated by private persons.....	1586
A. Actions against any person.....	1586
B. Actions against the Secretary.....	1587
III. Notice.....	1588
IV. Multiple suits including the Government.....	1588
V. Multiple suits not including the Government.....	1589
VI. Voluntary settlement.....	1590
VII. Costs.....	1590
Deere & Co.....	1591
Suggested amendment to section 207 of committee draft, based on Committee Print No. 1, dated August 25, 1970.....	1592

	Page
Department of Health, Education, and Welfare.....	1593
Letter dated August 27, 1970, to Senator Randolph from John G. Veneman, Acting Secretary.....	1593
Estimate of resources needed to implement proposed amendments to the Clean Air Act, etc.....	1593
Letter dated September 2, 1970, to Senator Muskie, from Acting Secretary John G. Veneman, HEW, with enclosure.....	1595
Letter dated September 2, 1970, to Thomas C. Mann, AMA, from Acting Secretary Veneman.....	1596
Letter dated August 19, 1970, to Senator Muskie from Elliot Richardson, Secretary, specifying concentration limits on sulfur and particulates, carbon monoxide, photochemical oxidant.....	1596
Table: Air pollution episode data.....	1599
Letter dated August 4, 1970, to Chairman Muskie from Creed C. Black, Assistant Secretary for Legislation.....	1601
Environmental Action.....	1603
Ford Motor Co.....	1604
Ford Motor Co.'s positions on the major issues of proposed amended Clean Air Act.....	1604
A. Stationary sources.....	1604
B. Automotive sources.....	1604
Percent reduction from the pre-1968 vehicles.....	1605
C. Citizens' suits.....	1606
Statement by L. A. Iacocca, executive vice president, Ford Motor Co.....	1608
Manufacturing Chemists Association.....	1628
Letter dated September 1, 1970, to Senator Randolph from W. J. Driver.....	1628
Letter dated August 26, 1970, from Jim Morton, with suggested changes.....	1632
Letter dated May 15, 1970, to Chairman Rogers of Subcommittee on Public Health and Welfare, Committee on Interstate and Foreign Commerce, House of Representatives, from W. J. Driver.....	1637
National Air Pollution Control Administration (NAPCA).....	1639
Federal Motor Vehicle Emission Goals for CO, HC, and NO _x Based on Desired Air Quality Levels, by D. S. Barth, J. C. Romanovsky, E. A. Schuck, and N. P. Cernansky.....	1639
National Association of Electric Companies.....	1651
Suggested amendments and explanations.....	1651
National Steel Corp.....	1653
Letter dated August 24, 1970, to Senator Randolph, with comments from Fred E. Tucker, vice president, environmental control, National Steel Corp.....	1653
Section 113, New source standards of performance.....	1653
Section 114, National emission standards—Selected air pollution agents.....	1654
Section 115, National emission standards—Hazardous air pollution agents.....	1654
Section 117, Federal enforcement.....	1654
Section 306, Federal procurement.....	1655
Nelson, Hon. Gaylord.....	1656
Table: Comparison of emission standards.....	1659
Standard Oil Co. of Indiana.....	1660
Letter dated August 27, 1970, to Senator Randolph, from J. E. Swearingen, with suggested changes.....	1660
Sun Oil Co.....	1663
Letter dated August 28, 1970, to Senator Randolph, with suggested changes.....	1663
Union Carbide Corp.....	1665
Letter dated August 26, 1970, to Senator Randolph, with comments on proposed act.....	1665
United Steelworkers of America.....	1667
Views of Senator Philip A. Hart.....	1669

[COMMITTEE PRINT NO. 1]

PRINTED FOR THE USE OF THE SENATE COMMITTEE ON
PUBLIC WORKS

AUGUST 25, 1970

91ST CONGRESS
2^D SESSION

S.

IN THE SENATE OF THE UNITED STATES

AUGUST , 1970

Mr. ----- introduced the following bill; which was read twice and referred
to the Committee on Public Works

A BILL

To amend the Clean Air Act and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That this Act may be cited as the “National Air Quality
4 Standards Act of 1970.”

5 SEC. 2. (a) Paragraph (1) of subsection 104(a) of
6 the Clean Air Act is amended to read as follows:

7 “(1) conduct and accelerate research programs di-
8 rected toward development of improved, low-cost tech-
9 niques for—

10 “(A) control of combustion byproducts of fuels,

11 “(B) removal of potential air pollution agents or

(V)

1 combination of such agents from fuels prior to combus-
2 tion,

3 “(C) control of emissions from the evaporation of
4 fuels,

5 “(D) improving the efficiency of fuels combustion
6 so as to decrease atmospheric emissions, and

7 “(E) producing synthetic or new fuels which, when
8 combusted, result in decreased atmospheric emissions;”

9 (b) Section 104 (a) (2) of the Clean Air Act is further
10 amended by striking “and” before clause (B) and redesignig-
11 nating clause (B) as clause (C) and inserting a new clause
12 (B) to read as follows:

13 “(B) part of the cost of programs to develop low
14 emission alternatives to the present internal combustion
15 engine; and”

16 (c) Section 104 (c) of the Clean Air Act is further
17 amended to read as follows:

18 “(c) For the purposes of this section there are author-
19 ized to be appropriated (1) for the fiscal year ending
20 June 30, 1971, \$125,000,000, (2) for the fiscal year end-
21 ing June 30, 1972, \$150,000,000, and (3) for the fiscal
22 year ending June 30, 1973, \$175,000,000. Amounts ap-
23 propriated pursuant to this subsection shall remain avail-
24 able until expended.”

25 SEC. 3. (a) Section 105 (a) of the Clean Air Act is

1 amended by adding at the end thereof a new paragraph to
2 read as follows:

3 “(4) Notwithstanding any other provision of this sec-
4 tion, the Secretary is authorized to make grants to any
5 State air pollution control agency in an amount not to ex-
6 ceed three-fourths of the cost of planning, developing, estab-
7 lishing, or improving, and grants to any such agency in an
8 amount of not to exceed three-fifths of the cost of maintain-
9 ing, a regional air quality control program within the mean-
10 ing of this subsection if the Secretary determines that:

11 “(A) Such regional program is operated by such State
12 agency and is serving or will serve an air quality control
13 region within the meaning of this Act;

14 “(B) Such State agency has adequate authority to abate
15 and control air pollution from all sources in the area served
16 by such regional program;

17 “(C) Such regional program shall not supplant any
18 air pollution control programs established by any municipal-
19 ity or group of municipalities unless the Governor of such
20 State determines that it is in the public interest to supplant
21 such air pollution control programs;

22 “(D) Development, establishment, improvement, or
23 maintenance of such regional program will not result in a
24 reduction of non-Federal matching funds available for air
25 pollution control activities in the area served by such regional

1 program, and that such grants shall supplement, not sup-
2 plant, any other funds available to such agency; and

3 “(E) Such State agency has made adequate provision
4 for coordination of such program with the related activities
5 of any municipal, intermunicipal, or interstate programs serv-
6 ing all or any portion of such air quality control region.”

7 (b) Section 105 of the Clean Air Act is further
8 amended by adding at the end thereof the following new
9 subsection:

10 “(d) The Secretary, at the request of any recipient
11 of a grant under this section, may reduce the payments to
12 such recipient by the amount of the pay, allowances, travel-
13 ing expenses, and any other costs in connection with the
14 detail of any officer or employee to the recipient under
15 section 301 of this Act, when such detail is for the con-
16 venience of, and at the request of, such recipient and for
17 the purpose of carrying out the provisions of this Act. The
18 amount by which such payments have been reduced shall
19 be available for payment of such costs by the Secretary,
20 but shall, for the purpose of determining the amount of any
21 grant to a recipient under subsection (a) of this section, be
22 deemed to have been paid to such agency.

23 “(e) If the Secretary determines that the program of
24 any agency eligible for a grant pursuant to this section is
25 inadequately staffed or funded to implement the require-

ments of this Act in any region, he shall withhold from such agency all or any portion of the funds which would be otherwise made available pursuant to this section. Such funds as would have been available to such agency shall be available to the Secretary to implement the purposes of this Act in such State or region."

SEC. 4. Section 106 of the Clean Air Act is amended;

(1) by striking "(a)" at the beginning of the first sentence thereof;

(2) by striking subsection (b) ;

(3) by striking in the first sentence thereof "section 107 (a) (2) " and inserting therein "this title"; and

(4) by inserting in the first sentence after the word "thereof" the following: "and coordinating effectively the enforcement thereof".

SEC. 5. Sections 107 through 109 of the Clean Air Act are amended to read as follows:

"RESEARCH RELATING TO AIR POLLUTION EFFECTS

"SEC. 107. (a) The Secretary shall give special emphasis to research on the short- and long-term effects of air pollution agents or combinations of such agents on public health and welfare. In the furtherance of such research, he shall conduct an accelerated research program—

"(1) to improve knowledge of the contribution of air pollution agents to the occurrence of adverse effects

1 on health, including, but not limited to, behavioral,
2 physiological, toxicological, and biochemical effects; and

3 “(2) to improve knowledge of the short- and long-
4 term effects of air pollution agents on the environment,
5 including effects on soils, water, vegetation, manmade
6 materials, animals, wildlife, weather, visibility, and cli-
7 mate as well as effects on esthetic, recreation, and eco-
8 nomic values.

9 “(b) In carrying out the provisions of this section the
10 Secretary shall, as may be necessary—

11 “(1) conduct epidemiological studies of the effects
12 of air pollution agents or combination of such agents on
13 mortality and morbidity;

14 “(2) conduct clinical and laboratory studies on
15 the immunologic, biochemical, physiological, and the
16 toxicological effects including carcinogenic, teratogenic,
17 and mutagenic effects of air pollution agents or combi-
18 nation of such agents;

19 “(3) utilize, on a reimbursable basis, the facilities
20 of existing Federal scientific laboratories and research
21 centers;

22 “(4) utilize the authority contained in section 103
23 (b) (1) through (4) of this Act; and

24 “(5) consult with other appropriate Federal agen-
25 cies to assure that research or studies conducted pur-

1 suant to this section shall be in addition to, and not
2 duplicative of, research and studies of such other Federal
3 agencies.

4 “(c) In entering into contracts under this section, the
5 Secretary is authorized to contract for a term not to exceed
6 ten years in duration. For the purposes of this subsection,
7 there are authorized to be appropriated \$15,000,000. Such
8 amounts as are appropriated shall remain available until ex-
9 pended and shall be in addition to any other appropriations
10 under this Act.

11 “(d) No research, demonstrations, experiments, or other
12 such work shall be carried out, contracted for, sponsored,
13 or authorized under this Act after the effective date of this
14 subsection, unless all information, uses, products, processes,
15 patents, and other developments resulting from such work
16 will (with such exception and limitation, if any, as the Sec-
17 retary may find to be necessary in the public interest and he
18 publishes his finding) be available to the general public.

19 “AIR QUALITY CONTROL REGIONS

20 “SEC. 108. (a) For the purpose of implementing ap-
21 plicable ambient air quality standards and for administrative
22 and other purposes, the Secretary, after consultation with
23 appropriate State and local authorities, shall, within ninety
24 days after enactment of this section, designate any interstate
25 and major intrastate air quality control region which he

1 deems necessary and appropriate. Any such designation shall
2 be based on jurisdictional boundaries, urban-industrial con-
3 centrations, existing levels of ambient air quality and other
4 factors necessary to provide for effective implementation of
5 air quality standards. The Secretary shall immediately notify
6 the Governor or Governors of the affected State or States of
7 such designation. Any area of any State which is not a part
8 of a region designated by the Secretary pursuant to this Act,
9 including regions designated prior to enactment of this sub-
10 section, shall be considered an air quality control region for
11 the purpose of this Act. The Governor of a State may sub-
12 divide such areas into two or more air quality control regions
13 for the purpose of developing implementation plans pursuant
14 to this Act.

15 “(b) All designations of air quality control regions
16 made pursuant to this Act shall be reviewed periodically
17 and modified, if necessary, by the Secretary, after consultation
18 with the appropriate State and local authorities in the af-
19 fected region and in any States and regions adjoining the
20 State or affected region, to insure the application of the most
21 effective and timely means of protecting and enhancing air
22 quality. In no event shall such review be less frequent than
23 once every five years.

24 “AIR QUALITY CRITERIA AND CONTROL TECHNIQUES

25 “SEC. 109. (a) (1) The Secretary shall, within thirty
26 days after enactment of this section and from time to time

1 thereafter, publish in the Federal Register a list of air pollu-
2 tion agents or combination of such agents—

3 “(A) which have, or may be expected to have,
4 an adverse effect on health and welfare;

5 “(B) the presence of which in the ambient air
6 results from numerous and diverse mobile or stationary
7 sources; and

8 “(C) for which air quality criteria requisite for
9 the protection of the public health and welfare are
10 planned. The Secretary shall, after consultation with
11 appropriate advisory committees and Federal depart-
12 ments and agencies and within twelve months after such
13 publication, develop and issue to the States such criteria.

14 “(2) Such criteria shall accurately reflect the latest
15 scientific knowledge useful in indicating the kind and extent
16 of all identifiable effects on health and welfare which may be
17 expected from the presence of an air pollution agent or
18 combination of such agents in the ambient air, in varying
19 quantities.

20 “(3) Such criteria shall include—

21 “(A) those variable factors which of themselves or
22 in combination with other factors may alter the effects on
23 public health and welfare of any air pollution agent or com-
24 bination of such agents, including, but not limited to, atmos-
25 pheric conditions,

1 “(B) the types of any air pollution agent or combina-
2 tion of such agents which, when present in the atmosphere,
3 may interact to produce an effect on public health and
4 welfare, and

5 “(C) information on any known or anticipated effects
6 associated with the presence of any air pollution agent or
7 combination of such agents in the ambient air, including, but
8 not limited to, effects on soils, water, vegetation, manmade
9 materials, animals, wildlife, weather, visibility, and climate,
10 as well as effects on economic values.

11 “(b) (1) The Secretary shall, after consultation with
12 appropriate advisory committees and Federal departments
13 and agencies, issue to the States and appropriate air pol-
14 lution control agencies information on pollution control
15 techniques, which information shall include data relating
16 to the technology and costs of emission control. Such infor-
17 mation shall include such data as are available on the latest
18 available technology and alternative methods of prevention
19 and control of air pollution. Such information shall also
20 include data on alternative fuels, processes, and operating
21 methods which will result in elimination or significant reduc-
22 tion of emissions.

23 “(c) Any air quality criteria or information on air
24 pollution control techniques issued under this Act by the
25 Secretary prior to the enactment of this subsection shall

1 continue in effect. The Secretary shall from time to time
2 review, modify, and reissue any criteria or information on
3 control techniques issued pursuant to this section.

4 “(d) The issuance of air quality criteria and information
5 on air pollution control techniques shall be announced in the
6 Federal Register and copies shall be made available to the
7 general public.”

8 SEC. 6. (a) Sections 110 and 111 of the Clean Air Act
9 are redesignated as sections 118 and 119.

10 (b) The Clean Air Act is further amended by inserting
11 after section 109 the following new sections:

12 “NATIONAL AIR QUALITY STANDARDS AND GOALS

13 “SEC. 110. (a) (1) Within thirty days after the date of
14 enactment of this section, the Secretary shall publish in the
15 Federal Register, in accordance with section 553 of title 5
16 of the United States Code, proposed national ambient air
17 quality standards for any air pollution agent or combination
18 of such agents for which air quality criteria have been issued
19 prior to the date of enactment of this section. He shall, after
20 a reasonable time for interested parties to submit written com-
21 ments thereon, promulgate such national ambient air quality
22 standards. Such promulgation shall occur no later than
23 ninety days after publication of such proposed national am-
24 bient air quality standards.

25 “(2) With respect to any air pollution agent or combi-

1 nation of such agents for which air quality criteria are
2 issued subsequent to enactment of this section, the Secretary
3 shall publish, simultaneously with the issuance of such cri-
4 teria, proposed national ambient air quality standards for
5 any such pollution agent or combination of such agents. The
6 procedure provided for in paragraph (1) of this subsection
7 shall apply.

8 “(3) National ambient air quality standards, proposed
9 and promulgated pursuant to paragraphs (1) and (2) of
10 this subsection, shall be ambient air quality standards the at-
11 tainment and maintenance of which are necessary to pro-
12 tect the health of persons. Such standards shall be revised,
13 as necessary, in the same manner as promulgated.

14 “(b) Simultaneously with the publication of proposed
15 national ambient air quality standards pursuant to subsec-
16 tion (a) of this section, the Secretary shall publish proposed
17 national ambient air quality goals the attainment and main-
18 tenance of which are necessary to protect the public health
19 and welfare from any known or anticipated effects associated
20 with the presence of such air pollution agent or combination
21 of such agents in the ambient air, including, but not limited
22 to, effects on soils, water, vegetation, manmade materials,
23 animals, wildlife, weather, visibility, and climate, as well as
24 effects on economic values. Such national ambient air quality
25 goals shall be published and promulgated in the same manner

1 as prescribed in subsection (a) of this section for national
2 ambient air quality standards. Such goals shall be revised, as
3 necessary, in the same manner as promulgated.

4 “(c) Standards and goals promulgated under this sec-
5 tion shall be effective on promulgation.

6 IMPLEMENTATION PLANS

7 “SEC. 111. (a) (1) After the promulgation of national
8 ambient air quality standards and national ambient air
9 quality goals, or revisions thereof under section 110 of this
10 Act, for any air pollution agent or combination of such
11 agents, each State shall, after reasonable notice and public
12 hearings, adopt and submit to the Secretary, within nine
13 months after such promulgation, a plan for implementation,
14 maintenance, and enforcement of such standards and goals
15 in each air quality control region designated or established
16 pursuant to this Act.

17 “(2) The Secretary shall, within four months after the
18 date required for such submission, act to approve or to dis-
19 approve such plan or portion thereof. The Secretary shall ap-
20 prove such plan, or any portion thereof, if he determines
21 that it—

22 “(A) provides for the attainment of national
23 ambient air quality standards within three years from
24 the date of approval of such plan;

25 “(B) includes emission requirements, schedules and

1 timetables of compliance, and such other measures as
2 necessary to insure attainment of any applicable ambient
3 air quality standard and goal;

4 “(C) includes provision for establishment and oper-
5 ation of appropriate devices, methods, and systems nec-
6 essary to monitor and interpret data on ambient air
7 quality;

8 “(D) includes to the extent necessary appropriate
9 procedures, including, but not limited to, land-use and
10 air and surface transportation controls and permits, for
11 insuring that any source of air pollution agents or com-
12 bination of such agents will be located, designed, con-
13 structed, equipped, and operated in such a way that such
14 sources will not interfere with implementation, mainte-
15 nance, and enforcement of any applicable air quality
16 standard and goal;

17 “(E) contains adequate provisions for intergov-
18 ernmental cooperation, including measures necessary to
19 insure that emissions of such agents or combination of
20 such agents from sources located in one air quality con-
21 trol region will not cause or contribute to a violation
22 of such air quality standards or prevent attainment of
23 such air quality goals in any other air quality control
24 region or portion thereof;

25 “(F) provides that any person who owns, leases,

operates, or controls any stationary source subject to the provisions and requirements of such implementation plan shall be required to furnish to the appropriate State periodic reports on the nature and amounts of emissions of any air pollution agent or combinations of such agents from such source, and further provides that such reports shall be a part of the public record and available at reasonable times for public inspection;

“(G) shows that the State has adequate personnel, funding, and authority to enforce any emission requirement, controls imposed on moving sources of air pollution, and other measures in such implementation plan, including the requirements for installation of monitoring equipment and methods, periodic reporting on the nature and amounts of emissions, and authority comparable to that in section 303 of this Act, as determined by the Secretary;

“(H) provides, to the extent necessary, for a program of periodic inspection and testing of motor vehicles, as authorized by section 208 of this Act;

“(I) provides for revision of such plan from time to time as may be necessary to take account of revisions of such ambient air quality standards and goals or improved or more expeditious methods of achieving such standards and goals;

1 “(J) identifies the air quality control region to
2 which such plan applies including the boundaries of
3 such region if it is one resulting from a subdivision
4 under section 108 (a) of this Act; and

5 “(K) was developed after such State conducted,
6 after adequate notice, public hearings to consider adop-
7 tion of ambient air quality standards more restrictive
8 than the national ambient air quality standards.

9 “(3) Each approved plan, or portion thereof, for im-
10 plementation, maintenance, and enforcement of such stand-
11 ards and goals shall be the implementation plan applicable
12 to such air quality control region.

13 “(b) The Secretary shall promptly prepare and publish
14 proposed regulations setting forth such a plan, or portion
15 thereof, for such air quality control region if (1) a State fails
16 to adopt or submit, for any air quality control region, or por-
17 tion thereof, a plan for implementation, maintenance, and
18 enforcement of ambient air quality standards and goals with-
19 in the time prescribed, or (2) the plan, or portion thereof,
20 adopted and submitted for any such region is determined by
21 the Secretary not to be in accordance with the requirements
22 of this section. If such State held no public hearing associated
23 with adoption of an implementation plan, the Secretary shall
24 provide opportunity for such hearing within such region on
25 any proposed regulation for such region. The Secretary shall,

1 within six months after the date required for submission of
2 such plans, promulgate any such regulations unless, prior to
3 such promulgation, the subject State has adopted and sub-
4 mitted a plan which the Secretary determines to be in ac-
5 cordance with the requirements of this section. A plan pro-
6 mulgated by the Secretary for any air quality control region
7 shall be the plan applicable to such region in the same man-
8 ner as if such plan had been adopted by the subject State
9 and approved by the Secretary pursuant to subsection (a)
10 of this section and shall remain in effect until such State
11 submits a plan and it is approved under this section.

12 “(c) Ambient air quality standards and implementa-
13 tion plans adopted by States and submitted to the Secretary
14 pursuant to this Act prior to enactment of this section shall
15 remain in effect if the Secretary determines that such air
16 quality standards and implementation plans are consistent
17 with the applicable requirements of this Act and will pro-
18 vide for the attainment of the national ambient air quality
19 standard in the time required by this Act. If the Secretary
20 determines that such standards and plans, or portions there-
21 of, are not consistent with the requirements of this Act, or
22 will not achieve the national ambient air quality standard in
23 the time required, he shall within ninety days after promul-
24 gation of any national ambient air quality standards pursuant

1 to section 110 (a) (1) of this Act submit to the appropriate
2 State or States recommendations as to changes needed to
3 meet the additional requirements of this Act, including rec-
4 ommendations to implement ambient air quality goals. Such
5 recommendations of the Secretary, or their equivalent, if not
6 adopted by the State, or States after public hearings and
7 within six months after submission by the Secretary shall be
8 promulgated pursuant to subsection (b) of this section.

9 “(d) (1) Whenever, on the basis of surveys, studies,
10 investigation, or reports, or any information otherwise made
11 available to him, the Secretary or his authorized representa-
12 tive finds on the basis of new information that, in any air
13 quality control region, an approved implementation plan
14 will be, or has been, substantially inadequate to achieve
15 national ambient air quality standards promulgated pur-
16 suant to this Act, he shall notify the appropriate State
17 or States and, unless such State or States revises such
18 plan within ninety days after receipt of such notice, or if
19 such revision is inadequate, the Secretary shall revise and
20 promulgate such plan within four months in accordance with
21 provisions of section 553 of title 5 of the United States
22 Code. Such revision may include an extension of the period
23 required for compliance of national ambient air quality
24 standards established pursuant to this Act for a reasonable
25 time not to exceed one year. No further extension shall be

1 granted pursuant to this provision and no extension shall
2 stay compliance with any emission requirement adopted as
3 a part of the plan subject to revision.

4 “(2) Any revised plan promulgated pursuant to this
5 subsection shall be the plan applicable to such region in the
6 same manner as if such plan had been adopted by the State
7 and approved by the Secretary pursuant to this section.

8 “(e) (1) No later than one year before the expiration
9 of the period for the attainment of ambient air of the quality
10 established by any national ambient air quality standard
11 pursuant to section 110 of this Act, the Governor of a State
12 in which all or part of an air quality control region designated
13 or established pursuant to this Act is located may file a peti-
14 tion in the district court of the United States for the dis-
15 trict in which all or a part of such air quality control region
16 is located, against the United States for relief from the effect
17 of such expiration (A) on such region, or portion thereof,
18 or (B) on a person or persons in such air quality control
19 region. In the event that such region is an interstate air
20 quality control region or portion thereof, any Governor of
21 any State which is wholly or partially included in such inter-
22 state region shall be permitted to intervene for the presenta-
23 tion of evidence and argument on the question of such relief.

24 “(2) Any action brought pursuant to this subsection
25 shall be heard and determined by a court of three judges in

1 accordance with the provisions of section 2284 of title 28
2 of the United States Code and appeal shall be to the Supreme
3 Court.

4 “(3) (A) In any such proceeding the Secretary shall
5 intervene for the purpose of presenting the evidence and
6 argument on the question of whether relief from the effect
7 of the expiration of the period to attain ambient air of the
8 quality established by any national ambient air quality stand-
9 ard should be granted.

10 “(B) Any interested party residing in any affected
11 State may intervene for the presentation of evidence and
12 argument on the question of relief.

13 “(4) The court, in view of the paramount interest of
14 the United States in achieving ambient air quality necessary
15 to protect public health, shall grant relief only if it deter-
16 mines such relief is essential to the public interest and the
17 general welfare of the United States, after finding—

18 “(A) that substantial efforts have been made to
19 protect the health of persons in such region; and

20 “(B) that means to control emissions causing or
21 contributing to such failure are not available or have
22 not been available for a sufficient period to achieve com-
23 pliance prior to the expiration of the period to attain
24 an applicable standard; or

25 “(C) that the failure to achieve such ambient air

1 quality standard is caused by emissions from a Federal
2 facility for which the President has granted an exemp-
3 tion pursuant to section 119 of this Act.

4 “(5) The court, in granting such relief, (A) shall not
5 extend the period established by this Act for more than one
6 year and may grant renewals for additional one year periods
7 only after the filing of a new petition with the court; (B)
8 may require steps to be undertaken to reduce any potential
9 adverse effects on the health of persons during any period
10 of extension in such region, and (C) may direct the Secre-
11 tary to modify any implementation plan developed under
12 this Act in a manner necessary to attain ambient air of the
13 quality established by any national ambient air quality
14 standard in the air quality control region affected.

15 “(f) The Secretary may, wherever he determines nec-
16 essary, extend the period for submission of the portion of any
17 plan for implementation of national ambient air quality goals,
18 for a period not to exceed eighteen months from the date
19 required for submission of such plan.

20 “STATE STANDARDS AND PLANS TO ACHIEVE GREATER AIR
21 QUALITY CONTROL

22 “SEC. 112. Nothing in this title shall be construed as
23 preventing a State, political subdivision thereof, inter-
24 municipal or interstate agency from adopting, within the time
25 provided in sections 110 and 111 of this Act, or revising

1 after such time, such standards and plans, including emis-
2 sion requirements, to implement an air quality program which
3 will (A) attain and maintain a higher level of air quality
4 than is specified in any national ambient air quality standard
5 promulgated pursuant to this Act, or (B) attain and main-
6 tain the level of air quality specified in any national ambient
7 air quality standard within a shorter period of time than re-
8 quired by this Act; or (C) within the time provided in sec-
9 tion 114 or section 115 of this Act, or revising after such
10 time, emission standards more stringent than those estab-
11 lished by the Secretary.

12 "NEW SOURCE STANDARDS OF PERFORMANCE

13 "SEC. 113. (a) For the purpose of this section, the
14 term—

15 "(1) 'stationary source' means any building, struc-
16 ture, facility, or installation which emits or may emit any
17 substantial amount of any air pollution agent or com-
18 bination of such agents so as to cause or contribute to
19 the endangerment of the public health or welfare;

20 "(2) 'new source' means any stationary source, the
21 construction or modification of which is begun on or
22 after the effective date of any standard of performance
23 applicable to such source;

24 "(3) 'construction' means any placement, assem-
25 bly, or installation of facilities or equipment at the

premises where such equipment will be used, including preparatory work at such premises;

“(4) ‘modification’ means any construction (other than pollution abatement facilities as determined by the Secretary or appropriate State agency which alters the nature or increases the amounts of air pollution agents or combination of such agents emitted by a stationary source; and

“(5) ‘owner or operator’ means any person who owns, leases, operates, controls, or supervises a new source.

“(b) (1) The Secretary shall, within sixty days after the enactment of this section and from time to time thereafter, publish in the Federal Register a list of categories of stationary sources which shall be subject to standards of performance established under this section.

“(2) Within one hundred and twenty days after the publication of such a list or revision thereof, the Secretary shall publish in the Federal Register proposed regulations, in accordance with section 553 of title 5 of the United States Code, establishing Federal standards of performance for new sources. Such standards shall be based on the greatest degree of emission control which the Secretary determines to be achievable through application of the latest

1 available control technology, processes, operating methods,
2 or other alternatives. The Secretary shall afford interested
3 persons an opportunity for written comment on such pro-
4 posed regulations. After considering such comments, he shall
5 promulgate, within ninety days after such publication, such
6 standards with such modifications as he deems appropriate
7 and shall notify the States of such promulgation. The Secre-
8 tary may from time to time revise such standards following
9 the procedure required by this subsection for such standards.

10 “(3) Standards of performance shall become effective
11 upon promulgation.

12 “(4) The Secretary may distinguish among classes,
13 types, and sizes within categories of new sources for the pur-
14 pose of establishing such standards.

15 “(c) The provisions of this section and the standards of
16 performance promulgated thereunder shall apply to any new
17 source owned and operated by the United States, unless a
18 more stringent emission requirement is required for such
19 source to implement any applicable air quality standard.

20 “(d) (1) The Secretary shall, within ninety days after
21 enactment of this section, promulgate regulations, in accord-
22 ance with section 553 of title 5 of the United States Code,
23 establishing a procedure for certification of compliance with
24 any standard of performance promulgated pursuant to this
25 section. Such procedure shall include—

1 “(A) provisions for preconstruction review of the
2 locations and design of any new source;

3 “(B) provisions for performance tests after com-
4 mencement of operation of any new source;

5 “(C) methods to identify and abate violations of
6 such standards of performance; and

7 “(D) methods to insure that any certified new
8 source shall not prevent implementation of national am-
9 bient air quality standards or national ambient air quality
10 goals promulgated under this title.

11 “(2) Except as provided in subsection (e) of this
12 section, upon application by any owner or operator of any
13 new source the Secretary shall certify such source if he deter-
14 mines, in accordance with the provisions of this section, that
15 such source complies with the applicable standards of per-
16 formance promulgated under this section.

17 “(e) (1) Each State within one hundred and eighty
18 days after promulgation of regulations pursuant to subsection
19 (d) of this section, or at any time thereafter, may develop
20 and submit to the Secretary a procedure for certification of
21 compliance with any standard of performance for any new
22 source located in such State. If the Secretary finds the State
23 procedure is at least equal to the requirements established by
24 subsection (d) of this section, he may delegate certification
25 authority provided in this section to such State.

1 “(2) Nothing in this section shall prohibit the Secre-
2 tary from (A) reviewing and suspending any State certifi-
3 cation to assure compliance with any applicable standard
4 of performance promulgated pursuant to this section, or (B)
5 acting to enforce any applicable performance standard pro-
6 mulgated pursuant to this section.

7 “(f) Every owner or operator of a new source shall
8 (1) establish and maintain such records, make such reports,
9 install, use, and maintain monitoring equipment or methods,
10 and provide such information as the Secretary may reason-
11 ably require to enable him to determine whether such source
12 is in compliance with this section and regulations established
13 thereunder, and (2) upon request of an officer or employee
14 duly designated by the Secretary permit such officer or em-
15 ployee at reasonable times to have access to and copy such
16 records, reports, or information. Except for emission data,
17 upon a showing satisfactory to the Secretary by such owner
18 or operator that such records, reports, or information or par-
19 ticular part thereof, if made public, would divulge trade se-
20 crets or secret processes of such owner or operator, the Secre-
21 tary shall consider such record, report, or information or
22 particular portion thereof confidential for the purposes of sec-
23 tion 1905 of title 18 of the United States Code, except that
24 such record, report, or information may be disclosed to other
25 officers or employees of the United States concerned with

1 carrying out this Act or when relevant in any proceeding
2 under this Act.

3 “(g) (1) After the effective date of standards of per-
4 formance promulgated under this section, it shall be
5 unlawful—

6 “(A) for any owner or operator to operate any
7 new source without certification issued under this section;
8 or

9 “(B) for any owner or operator of any certified
10 new source to operate such source in violation of any
11 standard of performance applicable to such source; or

12 “(C) for any owner or operator to fail or refuse
13 to permit access to, or copying of, records or to fail to
14 make reports, or to fail to install monitoring equipment
15 or methods, or provide information required under this
16 section.

17 “(2) The district courts of the United States shall
18 have jurisdiction to restrain violations of paragraph (1) (A)
19 or paragraph (1) (C) of this subsection. In any action to re-
20 strain violations, subpoenas for witnesses who are required
21 to attend a district court in any district may run into any
22 other district.

23 “(3) Any owner or operator who violates paragraph
24 (1) (A) or paragraph (1) (C) of this subsection shall be
25 liable to a civil penalty of not more than \$5,000 for each

1 offense which shall be assessed by the Secretary after an op-
2 portunity for a public hearing. Each day of violation shall be
3 a separate offense.

4 “(4) Any violation of paragraph (1) (B) of this sub-
5 section shall be subject to abatement pursuant to section 117
6 of this Act. If any owner or operator of a certified new source
7 does not act within seventy-two hours as provided in any
8 order issued pursuant to section 117 (a) (2) of this Act to
9 abate such violation, the Secretary shall suspend any applic-
10 able Federal or State certification. Failure to suspend opera-
11 tion of such source after such suspension shall be considered
12 a knowing violation for purposes of section 117 of this Act
13 and shall, upon conviction, subject the owner or operator
14 to a fine of at least \$5,000 for each day of operation after
15 such suspension.

16 “NATIONAL EMISSION STANDARDS—SELECTED AIR
17 POLLUTION AGENTS

18 “SEC. 114. (a) For the purpose of this section the
19 term—

20 “(1) ‘selected air pollution agent’ means any air
21 pollution agent or combination of such agents which is
22 not subject to the provisions of sections 109 and 110 or
23 115 of this Act, and which has or may be expected to
24 have an adverse effect on health and welfare and the
25 presence of which, in the ambient air, results from emis-

sions from categories of stationary sources otherwise subject to the provisions of section 113 of this Act; and

“(2) ‘owner or operator’ means any person who owns, leases, operates, controls, or supervises a stationary source.

“(b) The Secretary shall, within 180 days after the enactment of this section and from time to time thereafter, compile and publish in the Federal Register a list of selected air pollution agents or combinations of agents for which he deems that emission standards are appropriate under this section in order to carry out the purposes of this Act.

“(c) (1) The Secretary shall from time to time publish in the Federal Register, in accordance with section 553 of title 5 of the United States Code, proposed regulations establishing emission standards for such air pollution agents or combination of such agents included in such list. Such standards shall be designed to insure that emissions of such pollution agent or combination of agents from any such stationary source shall not endanger public health and welfare. The Secretary shall afford interested persons an opportunity for written comment on such proposed regulations, and after considering such comments shall promulgate within one hundred and twenty days after such publication, such emission standards with such modifications as he deems appropriate, and shall notify the States of such promulgation. The

1 Secretary may distinguish among classes, types, and sizes
2 within categories of such sources for the purpose of this
3 section.

4 “(2) Any emission standard promulgated pursuant to
5 this section shall be reviewed and, if appropriate, revised
6 in the same manner as initially promulgated.

7 “(3) Such standards shall become effective on the date
8 specified in such promulgation, but in no event more than
9 twenty-four months after such promulgation.

10 “(4) The Secretary may, upon application filed by
11 any owner or operator, waive, subject to such terms and
12 conditions as he may prescribe, the application of this section
13 to any stationary source of such owner or operator if he
14 finds, and publishes his finding, that such source has achieved
15 the greatest degree of air pollution control currently tech-
16 nically feasible and that the health of persons is not adversely
17 affected by such waiver. Such waiver shall be subject to the
18 review provision of section 116 of this Act.

19 “(d) After the effective date of the standards of per-
20 formance promulgated under this section, every owner or
21 operator of a stationary source shall (1) establish and main-
22 tain such records, make such reports, install, use, and main-
23 tain monitoring equipment or methods and provide such in-
24 formation as the Secretary may reasonably require to enable
25 him to determine whether such source is in compliance with

1 this section and the standards established hereunder, and (2)
2 upon request of an officer or employee duly designated by the
3 Secretary permit such officer or employee, at reasonable
4 times to have access to and copy such records, reports, or
5 information. Except for emission data, upon a showing satis-
6 factory to the Secretary by such owner or operator that
7 such records, reports, or information or particular part there-
8 of, if made public, would divulge trade secrets or secret
9 processes of such owner or operator, the Secretary shall
10 consider such record, report, or information or particular
11 portion thereof confidential for the purposes of section 1905
12 of title 18 of the United States Code, except that such
13 record, report, or information may be disclosed to other
14 officers or employees of the United States concerned with
15 carrying out this Act or when relevant in any proceeding
16 under this Act.

17 “(e) (1) Beginning on and after the effective date of
18 any emission standard promulgated under this section, it shall
19 be unlawful for any owner or operator to operate any sta-
20 tionary source in violation of such standard.

21 “(2) Beginning on and after the effective date of any
22 control standard promulgated under this section, it shall be
23 unlawful for any owner or operator of a stationary source to
24 fail or refuse to permit access to, or copying of, records or
25 to fail to make reports, or to fail to install and use monitoring

1 equipment or methods, or provide information required by
2 the Secretary pursuant to subsection (d) of this section.

3 “(f) Any violation of paragraph (1) of subsection
4 (e) (1) of this section shall be subject to abatement pursuant
5 to section 117 of this Act.

6 “(g) Any owner or operator who violates paragraph
7 (2) of subsection (e) of this section shall be liable to a
8 civil penalty of not more than \$5,000 for each offense which,
9 after an opportunity for a hearing, shall be assessed by the
10 Secretary.

11 “(h) Any failure of such owner or operator, to comply
12 with an order issued pursuant to section 117 (a) (2) of this
13 Act shall be considered a knowing violation for purposes of
14 section 117 (b) of this Act, and shall, upon conviction,
15 subject owner or operator to a fine of at least \$5,000 for
16 each day of operation after such suspension.

17 “(i) (1) Each State may within one hundred and
18 eighty days after promulgation of any emission standard pur-
19 suant to this section develop and submit to the Secretary
20 a procedure for enforcement of any such emission standards
21 for any stationary source located in such State. If the Secre-
22 tary finds the State procedure is adequate to implement the
23 purposes of this section he may delegate enforcement author-
24 ity provided in this section to such State.

25 “(2) Nothing in this subsection shall prohibit the Secre-

tary from acting to enforce any applicable emission standard promulgated pursuant to this section.

“NATIONAL EMISSION STANDARDS—HAZARDOUS AIR

POLLUTION AGENTS

“SEC. 115. (a) (1) The Secretary, shall, within ninety days after the enactment of this section and from time to time thereafter, publish in the Federal Register a list of those air pollution agents or combination of such agents which available material evidence indicates are hazardous to the health of persons and which shall be subject to a prohibition or emission standard established under this section.

“(2) Within one hundred and eighty days after the publication of such list, or revision thereof, the Secretary, in accordance with section 553 of title 5 of the United States Code, shall publish a proposed prohibition of emissions of each such agent or combination of agents from any stationary source together with a summary of such evidence and a notice of a public hearing within thirty days. As soon as possible after such hearing, but not later than six months after such publication, the Secretary shall promulgate such prohibition, unless, based upon a preponderance of evidence adduced at such hearing, he finds within such period and publishes his finding—

“(A) that such agent is not hazardous to the health of persons; or

1 “(B) that a departure from such prohibition will
2 not be hazardous to the health of persons.

3 “(3) If the Secretary finds under paragraph (1) (A)
4 of this subsection that such agent is not hazardous to the
5 health of persons, he shall immediately publish an emission
6 standard in accordance with section 114 of this Act.

7 “(4) If the Secretary finds under paragraph (1) (B)
8 of this subsection that a departure from such prohibition
9 will not be hazardous to the health of persons, he shall im-
10 mediately promulgate an emission standard for such agent or
11 combination of agents to protect the health of persons.

12 “(5) Any prohibition or emission standard established
13 pursuant to this section shall become effective upon promul-
14 gation.

15 “(b) For purposes of this section, an air pollution agent
16 which is ‘hazardous to the health of persons’ is one whose
17 presence, chronically or intermittently, in trace concentra-
18 tions in the ambient air, either alone or in combination with
19 other agents, causes or will cause, or contribute to, an in-
20 crease in mortality or an increase in serious irreversible or
21 incapacitating reversible damage to health.

22 “(c) Upon evidence of a violation of any prohibition or
23 emission standard established pursuant to this section, the
24 Secretary shall bring a civil suit on behalf of the United
25 States, against the owner or operator of such source which

1 causes or contributes to such violation for immediate abate-
2 ment, including a permanent or temporary injunction, re-
3 straining order, or any other appropriate order, in the appro-
4 priate United States district court for the district in which
5 such stationary source is located or in which the owner or
6 operator thereof has his principal office or resides. Each court
7 shall have jurisdiction to provide such relief as may be ap-
8 propriate. In any such action, the findings of the Secretary
9 under subsection (a) of this section shall be presumed cor-
10 rect.

11 “(d) Any prohibition or emission standard promulgated
12 pursuant to this section shall be subject to review, and if
13 appropriate, revision in the same manner as initially prom-
14 ulgated.

15 “JUDICIAL REVIEW

16 “SEC. 116. (a) The United States Court of Appeals for
17 the District of Columbia Circuit shall have jurisdiction to hear
18 and decide any petition filed by any interested persons
19 against the Secretary for review (A) of any promulgated
20 ambient air quality standard, goal, prohibition or emission
21 standard, standard of performance, or waiver granted pursu-
22 ant to section 114 (c) (4) of this Act, or (B) of any ap-
23 proved or promulgated implementation plan including any
24 emission requirement therein, within thirty days from the
25 date of such promulgation or approval, or after such date

1 whenever it is alleged that significant new information has
2 become available, praying that such promulgation or ap-
3 proval be modified or set aside in whole or in part. Any de-
4 termination of finding of the Secretary, pursuant to any
5 administrative procedure leading to (A) the promulgation
6 of any ambient air quality standard, goal, prohibition, emis-
7 sion standard, standard of performance or waiver, or (B)
8 the approval or promulgation of any implementation plan
9 including any emission therein subject to challenge under
10 this subsection, shall be presumed correct. The court shall
11 have jurisdiction to provide such relief as may be appro-
12 priate.

13 “(b) The commencement of a proceeding under this
14 subsection shall not operate as a stay of such standard,
15 goal, plan, including any emission requirement therein. pro-
16 hibition, emission standard, standard of performance, or
17 waiver, unless and until the court determines that the party
18 requesting such stay shows that there is a substantial likeli-
19 hood that such party will prevail on the merits of the matter
20 subject to review and that the interest of the public will not
21 be harmed by such a stay.

22 “(c) The judgment of the court shall be subject to re-
23 view only by the Supreme Court of the United States upon
24 a writ of certiorari or certification as provided in section 1254
25 of title 28 of the United States Code.

1 "FEDERAL ENFORCEMENT

2 "SEC. 117. (a) (1) The violation of any implementation
3 plan, including any emission requirements therein, or any
4 emission standard, or standard of performance established
5 pursuant to this Act is prohibited.

6 "(2) Whenever, on the basis of surveys, studies, inves-
7 tigations, reports or any information otherwise made avail-
8 able to him, the Secretary or an authorized representative
9 of the Secretary finds (A) that any person is in violation of,
10 or is causing or contributing to a violation of, an implemen-
11 tation plan, including any emission requirement therein, and
12 that, in the judgment of the Secretary, a State has not satis-
13 factorily administered its implementation plan, particularly
14 the requirements of section 111 (a) (2) (G) ; or (B) that
15 any person is in violation or is causing or contributing to a
16 violation of standards of performance established under sec-
17 tion 113 of this Act; or (C) that any person is in violation
18 of an emission standard established under section 114 of this
19 Act; he shall promptly issue an order in writing to such per-
20 son requiring such person to abate such violation as soon as
21 possible and within a time to be prescribed therein. In the
22 case of a violation of any emission requirement, emission
23 standard, or standard of performance, such time shall not
24 exceed seventy-two hours. A copy of the order shall be sent
25 to the State air pollution control agency of the State or States

1 in which the violation occurred and, in any case where the
2 order issued is to a corporation, to appropriate corporate
3 officers. Subject to the provisions of this subsection, such
4 order shall remain in effect until the Secretary or such repre-
5 sentative determines by written notice to such person that
6 such violation no longer exists. All such orders shall state
7 with reasonable specificity the nature of the violation. Noth-
8 ing in this section shall affect the authority of the Secretary
9 pursuant to section 309 of this Act.

10 “(3) For the purpose of (A) establishing any ambient
11 air quality standard, prohibition, emission standard, or
12 standard of performance pursuant to this Act; or (B)
13 making any investigation under this Act of any building,
14 structure, or other facility subject to any air quality stand-
15 ard, implementation plan, emission requirement, prohibition,
16 emission standard, waiver, or standard of performance estab-
17 lished under this Act, the Secretary or his authorized rep-
18 resentative shall have a right of entry to, upon, or through
19 such building, structure, or facility, after reasonable notice
20 and upon presentation of his credentials. The Secre-
21 tary shall, when appropriate, require any person who
22 owns, leases, operates, or controls such building, struc-
23 ture, or other facility to install, use and maintain moni-
24 toring equipment and methods and to sample any emission
25 subject to emission requirements, emission standards, or

1 standards of performance in accordance with such methods,
2 at such locations, at such intervals, and in such manner as
3 the Secretary shall prescribe and to report such samples to
4 the Secretary as he may prescribe and such report shall be
5 public.

6 “(4) The Secretary shall institute a civil action for
7 relief, including a permanent or temporary injunction, re-
8 straining order, or any other appropriate order in the district
9 court of the United States for the district in which a person
10 subject to any implementation plan, emission requirement,
11 emission standard, or standard of performance established
12 under this Act is located or resides or is doing business,
13 whenever such person——

14 “(A) violates or fails or refuses to comply with any
15 order issued under paragraph (2) of this subsection (any
16 such order shall be in force unless and until the court
17 determines that the interests of the public are best
18 served by staying such order and that there is a substan-
19 tial likelihood that such party will prevail on the merits
20 of the matters subject to review) ; or

21 “(B) violates or fails or refuses to comply with any
22 requirement established under section 113, 114, or 115
23 of this Act ; or

24 “(C) refuses to furnish any information, data, or
25 reports or refuses to install monitoring equipment or

1 methods required by the Secretary in furtherance of the
2 provisions of this Act; or

3 “(D) refuses to permit access to, and copying of,
4 such records as the Secretary determines necessary in
5 carrying out the provisions of this Act.

6 “(5) Such court shall have jurisdiction to provide such
7 relief as may be appropriate under this section.

8 “(b) Any person (A) who knowingly violates any
9 schedule or timetable of compliance or emission require-
10 ment included in any implementation plan, or (B) who
11 knowingly violates any (i) emission standard established
12 under section 114 of this Act, or (ii) prohibition or emis-
13 sion standard established under section 115 of this Act, or
14 (C) who knowingly violates any standard of performance
15 under section 113, or (D) who knowingly violates or fails
16 or refuses to comply with any order issued under this sec-
17 tion, shall, upon conviction, be punished by a fine of not
18 more than \$25,000 per day of violation, or by imprisonment
19 for not more than one year, or by both. If the conviction is
20 for a violation committed after the first conviction of such
21 person under this section, punishment shall be by a fine of
22 not more than \$50,000 per day of violation, or by imprison-
23 ment for not more than two years, or by both.

24 “(c) Any person who knowingly makes any false state-
25 ment, representation, or certification in any application, rec-

ord, report, plan, or other document filed or required to be maintained under this Act or falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained under this Act, or any order or final decision issued under this section shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six months, or by both."

SEC. 7. Redesignated section 119 of the Clean Air Act is amended to read as follows:

"CONTROL OF POLLUTION FROM FEDERAL FACILITIES

"SEC. 119. (a) Each agency of the executive, legislative, and judicial branches of the Federal Government, (1) having jurisdiction over any real property or facility, including any aircraft, vehicle, or vessel which it owns and operates, or (2) engaged in any activity resulting, or which may result, in the discharge of air pollution agents or combination of such agents, shall provide leadership in carrying out the policy and purposes of this Act and shall comply with the requirements of this Act in the same manner as any person must so comply in the administration of such property, facility, or activity. Except for new sources under subsection (c) of section 113 of this Act, the President may exempt any such property, facility, vehicle, or vessel of any such agency of the executive branch from such compliance

1 if he determines it to be in the paramount interest of the
2 United States to do so. No such exemption shall be granted
3 due to lack of appropriation unless the President shall have
4 specifically requested such appropriation as a part of the
5 budgetary process and the Congress shall have failed to make
6 available such requested appropriation. Any exemption shall
7 be for a period not in excess of one year, but additional
8 exemptions may be granted for periods of not to exceed one
9 year upon the President making a new determination. The
10 President shall report each January to the Congress all
11 exemptions from the requirements of this section granted
12 during the preceding calendar year, together with his reason
13 for granting each such exemption. Exemptions for agencies
14 of the legislative or judicial branches shall be by act of
15 Congress.

16 “(b) The Governor, the attorney general or any citi-
17 zen of any State in which any Federal property, facility, or
18 activity is located may seek to enforce the provision of this
19 section pursuant to section 304 of this Act.”

20 SEC. 8. Sections 202 through 212 of the Clean Air Act
21 are amended to read as follows:

22 “ESTABLISHMENT OF STANDARDS

23 “SEC. 202. (a) Except as provided in subsection (e)
24 of this section, the Secretary shall by regulation, after
25 consulting with appropriate advisory committees, prescribe,

1 as soon as practicable and in accordance with the provisions
2 of this section, standards applicable to the emission of all
3 known substances of any kind or description from any class
4 or classes of (A) vessels, aircraft, commercial vehicles and
5 new noncommercial vehicles, and (B) vessel, aircraft, com-
6 mercial vehicle, and new non-commercial-vehicle engines,
7 manufactured for sale, sold, offered for sale, introduced or
8 delivered for introduction into commerce, or imported into
9 the United States for sale or resale, or operated in commerce
10 in the United States, which in his judgment cause or contrib-
11 ute to, or are likely to cause or to contribute to, air pollu-
12 tion. Such standards shall apply to such vessels, aircraft,
13 vehicles, or engines whether they are designed as complete
14 systems or incorporate other devices to prevent or control
15 such pollution.

16 “(b) (1) In order to assure attainment and maintenance
17 of national ambient air quality standards established under
18 this Act and, consistent with the requirements of subsection
19 (e) of this section, any standards for the control of emissions
20 from vehicles and vehicle engines shall be based on the
21 degree of emission control from such vehicles and vehicle
22 engines required to assure protection of public health and
23 welfare and implementation of ambient air quality standards
24 without regard to the source of power or the propulsion sys-

1 tem used to obtain such emission reduction except as re-
2 quired by subsection (e) (2) of this section.

3 “(2) Regulations or standards issued by the Secretary
4 under this title prior to the enactment of this sentence shall
5 continue in effect until revised by the Secretary consistent
6 with the purposes of this Act.

7 “(c) Such regulations shall be published in the Federal
8 Register, in accordance with section 553 of title 5 of the
9 United States Code, and interested persons shall be given an
10 opportunity to submit written comments thereon. After con-
11 sidering such comments, the Secretary shall promulgate such
12 regulations in the Federal Register with such modifications
13 as he deems appropriate consistent with the purposes of this
14 section. The Secretary shall from time to time review and,
15 when appropriate, revise such regulations in accordance with
16 this section.

17 “(d) Any regulation promulgated under this section and
18 revisions thereof shall become effective on the date or dates
19 specified in such regulations, which date or dates shall be
20 determined by the Secretary after consideration of the pe-
21 riod reasonably necessary from a technical standpoint for
22 compliance.

23 “(e) (1) Beginning with model year 1975 or after
24 January 1, 1975, any new light duty motor vehicle or any
25 new light duty motor vehicle engine, as determined by the

1 Secretary, shall be certified to meet emission standards es-
2 tablished by the Secretary as necessary to achieve ambient
3 air necessary to protect the public health and welfare. Such
4 standards shall, at the minimum, represent (i) for those air
5 pollution agents for which emission standards were in effect
6 prior to the date of enactment of this Act, a ninety per
7 centum reduction from allowable emissions for 1970 model
8 year vehicles or engines, and (ii) for those air pollution
9 agents for which no emission standards were in effect, a
10 ninety per centum reduction from the average of such pol-
11 lution agents as actually measured from 1970 model year
12 vehicles or engines, based on measurement techniques es-
13 tablished by the Secretary.

14 “(2) In the event a new power source or propulsion
15 system is submitted for certification pursuant to this Act,
16 the Secretary shall determine, prior to certification, that
17 such source shall not cause or contribute to a violation of
18 ambient air quality standards.

19 “(f) The Secretary shall, before publishing any such
20 regulations or revisions thereof, consult with (1) the Fed-
21 eral Aviation Administrator with respect to aircraft and air-
22 craft engines in order to assure appropriate consideration
23 for aircraft safety and navigation, and (2) the Secretary of
24 the department in which the Coast Guard is operating with
25 respect to vessels and vessel engines in order to insure ap-

1 appropriate consideration of vessel safety and navigation. The
2 Secretary of Defense may exempt, for a period of not to ex-
3 ceed one year, such public vessels and aircraft from the ap-
4 plication thereto of such regulations upon determining that
5 such exemption is necessary for the purpose of national
6 security. He shall notify the Congress of such exemption.

7 "PROHIBITED ACTS

8 "SEC. 203. (a) The following acts and the causing
9 thereof are prohibited—

10 " (1) (A) in the case of a manufacturer of new ves-
11 sels, new aircraft, new vehicles, new vessel engines, new
12 aircraft engines, or new vehicle engines for distribution
13 in commerce, to sell or to offer to sell or to deliver for
14 introduction into commerce any such vessel, aircraft,
15 vehicle, or engine, or (B) in the case of any person,
16 the importation into the United States of any such ves-
17 sel, aircraft, vehicle, or engine, which is manufactured
18 or imported after the effective date of regulations pro-
19 mulgated under section 202 which are applicable to such
20 vessel, aircraft, vehicle, or engine, unless it is in con-
21 formity with such regulations (except as provided in
22 subsection (b) of this section) and section 206 of
23 this Act;

24 " (2) in the case of an owner or operator of a vessel,
25 aircraft, commercial or new noncommercial vehicle, or

1 a vessel, commercial or new noncommercial vehicle, or
2 aircraft engine, the use in commerce of such vessel, air-
3 craft, vehicle, or engine after the effective date of such
4 regulations which are applicable thereto, unless it is in
5 conformity with such regulations (except as provided
6 in subsection (b) of this section) and section 206 of
7 this Act;

8 “(3) for any person to fail or refuse to permit ac-
9 cess to, or copying of, records or to fail to make reports
10 or provide information required under this title;

11 “(4) for any person to remove or render inopera-
12 tive other than for purposes of maintenance and repair,
13 any device or element of design installed on or in any
14 such vessel, aircraft, or vehicle, or such vessel, aircraft,
15 or vehicle engine in compliance with such regulations
16 prior to its sale and delivery to the ultimate purchaser; or

17 “(5) for any person to remove or render inopera-
18 tive, other than for purposes of maintenance or repair,
19 any device or element of design installed on or in any
20 such vessel, aircraft, or vessel or engine thereof in com-
21 pliance with such regulations during the term of its use.

22 “(b) (1) The Secretary may exempt any new vessel,
23 aircraft, or vehicle, or new vessel, aircraft, or vehicle engine,
24 or class thereof from the requirements of subsection (a),
25 upon such terms and conditions as he may find necessary

1 to protect the public health or welfare, for the purpose of
2 research, investigations, studies, demonstrations, or training.

3 “(2) A new vessel, aircraft, or vehicle, or a new vessel,
4 aircraft, or vehicle engine imported, or offered for importa-
5 tion, by any person in violation of subsection (a) shall be
6 refused admission into the United States. The Secretary
7 of the Treasury and the Secretary may, by joint regulation,
8 provide for deferring final determination as to such admis-
9 sion and authorize the delivery of such a vessel, aircraft, vehi-
10 cle, or engine offered for import to the owner or operator or
11 consignee thereof upon such terms and conditions (including
12 the furnishing of a bond) as may appear to them appropriate
13 to insure that any such vessel, aircraft, vehicle, or engine
14 will be brought into conformity with the standard, require-
15 ments, and limitations applicable to it under this title. The
16 Secretary of the Treasury shall, if such vessel, aircraft, vehi-
17 cle, or engine is finally refused admission under this para-
18 graph, cause disposition thereof in accordance with the
19 customs laws unless it is exported, under regulations pre-
20 scribed by the Secretary of the Treasury within ninety days
21 after the date of notice of such refusal or such additional
22 time as may be permitted pursuant to such regulations,
23 except that disposition in accordance with the customs laws
24 may not be made in such manner as may result, directly,
25 or indirectly, in the sale, to the ultimate purchaser, of a

1 new vessel, aircraft, vehicle, or engine that fails to comply
2 with applicable standards of the Secretary.

3 "INJUNCTION PROCEEDINGS

4 "SEC. 204. (a) The district courts of the United States
5 shall have jurisdiction to restrain violations of paragraph
6 (1), (2), or (3) of section 203 (a) of this title. Actions to
7 restrain such violations shall be brought by, and in, the name
8 of the United States in accordance with the applicable pro-
9 visions of section 117 (a) (4) of this Act. In any such
10 action, subpoenas for witnesses who are required to attend
11 a district court in any district may run into any other district.

12 "(b) If the Secretary determines that any State has
13 adequate authority to restrain violations of paragraph (1),
14 (2), or (3) of section 203 (a) of this title, he may delegate
15 to any such enforcement authority, except that nothing in
16 this subsection shall operate to prohibit the Secretary from
17 also acting at any time to restrain such violations.

18 "PENALTIES

19 "SEC. 205. Any person who violates paragraph (1),
20 (2), (3), (4), or (5) of section 203 (a) of this title shall
21 be subject, upon conviction, to a fine of not more than
22 \$10,000. Such violation with respect to paragraphs (1),
23 (2), (4), and (5) of section 203 (a) of this title shall con-
24 stitute a separate offense with respect to each vessel, air-
25 craft, vehicle, or engine subject to its requirements.

1 "CERTIFICATION

2 "SEC. 206. (a) (1) The Secretary shall test or require
3 to be tested, in such manner as he deems appropriate, any
4 new vessel, vehicle, or aircraft, or new vessel, vehicle, or
5 aircraft engine, or class thereof, submitted by a manufacturer
6 to determine whether such vessel, vehicle, aircraft, or engine
7 conforms with the regulations prescribed under section 202
8 of this title. If such vessel, vehicle, aircraft, or engine con-
9 forms to such regulations, the Secretary shall issue a certifi-
10 cate of conformity upon such terms and conditions, and for
11 such period as he may prescribe, which period shall not be
12 longer than one year unless the manufacturer demonstrates
13 that the new model period for such vessel, vehicle, aircraft,
14 or engine is for longer than one year.

15 "(2) With respect to such vessels and vessel engines,
16 the testing, certification, and related actions required by this
17 section shall be conducted by the Secretary of the department
18 in which the Coast Guard is located pursuant to laws admin-
19 istered by him. With respect to such aircraft and aircraft en-
20 gines, the testing, certification, and related actions required
21 by this section shall be conducted by the Federal Aviation
22 Administration pursuant to the Federal Aviation Act of
23 1958, as amended. With respect to vessels and aircraft and
24 the engines thereof owned and operated by the Department
25 of Defense, that Department shall conduct the testing, certifi-
26 cation, and related actions required by this section.

1 “(3) The Secretary shall develop and publish in the
2 Federal Register, after consultation with, as appropriate, the
3 Federal Aviation Administrator, the Secretary of the depart-
4 ment in which the Coast Guard is located, and the Secretary
5 of Defense and other interested Federal agencies, regulations
6 simultaneously with those published under section 202 of
7 this title, in accordance with section 553 of title 5 of the
8 United States Code, concerning the testing of such vessels,
9 aircraft, and engines. Such regulations shall provide, among
10 other things, such technical data and other information as
11 shall be required by the Secretary in conducting such tests.
12 The Secretary shall provide an opportunity for interested
13 persons to submit written comments thereon. He shall there-
14 after promulgate such regulations with such modifications
15 as he deems appropriate and such regulations shall become
16 effective upon publication.

17 “(b) (1) The Secretary shall establish and inform the
18 manufacturers of (1) methods and procedures to be used
19 in making tests under this section; (2) methods and pro-
20 cedures to be used in determining the relationship of test
21 results to applicable regulations established under section
22 202; and (3) labeling requirements for engines and vehicles
23 tested in accordance with this section.

24 “(2) In order to determine whether any new vessel,
25 vehicle, or aircraft, or new vessel, vehicle, or aircraft engine

1 under the control or custody of a manufacturer conform
2 with the regulations with respect to which a certificate
3 of conformity was issued, the Secretary is authorized to
4 test or require testing of each such vessel, vehicle, aircraft,
5 or engine, or class thereof, while in the control or custody
6 of the manufacturer.

7 “(3) If, based on such test, the Secretary determines
8 that such vessel, vehicle, aircraft, or engine does not conform
9 with the regulations with respect to which the certificate of
10 conformity was issued, he shall notify the manufacturer, and
11 he may by notice suspend or revoke such certificate in
12 whole or in part. Such suspension or revocation shall apply in
13 the case of any new vessel, vehicle, or aircraft or any new
14 vessel, vehicle, or aircraft engine manufactured after the date
15 of such notification (or manufactured before such date if still
16 in the control or custody of the manufacturer), and until
17 such time as the Secretary finds that such vessel, vehicle,
18 aircraft, and engine manufactured by the manufacturer con-
19 form to such regulations. If, during any period of suspension
20 or revocation the Secretary finds that such vessel, vehicle,
21 aircraft, or engine, or class thereof, conforms to such regula-
22 tions, he shall by notice reinstate such certificate.

23 “(4) (A) Upon receipt of notice of such suspension or
24 revocation under this subsection or denial of a request for
25 certification under subsection (a), the manufacturer may

1 file with the Secretary an application within thirty days of
2 receipt thereof for a public hearing for review thereof. Upon
3 receipt of such application, the Secretary shall promptly
4 hold a public hearing to enable such manufacturer and other
5 interested persons to present information relating thereto.
6 The filing of an application for review under this paragraph
7 shall not operate as a stay of such suspension, revocation,
8 or denial. Any such hearing shall be of record and shall be
9 subject to section 554 of title 5 of the United States Code.

10 “(B) Immediately upon completion of such hearing, the
11 Secretary shall make findings of fact and he shall issue his
12 finding and a final decision vacating, affirming, modifying, or
13 terminating such notice.

14 “(C) In connection with any hearing under this sub-
15 section, the Secretary may sign and issue subpoenas for the
16 attendance and testimony of witnesses and the production
17 of relevant papers, books, and documents, and administer
18 oaths. Witnesses summoned shall be paid the same fees and
19 mileage that are paid witnesses in the courts of the United
20 States. In case of contumacy or refusal to obey a subpoena
21 served upon any person under this subparagraph, the district
22 court of the United States for any district in which such per-
23 son is found or resides or transacts business, upon application
24 by the United States and after notice to such person to appear
25 and give testimony before the Secretary or to appear and

1 produce documents before the Secretary, or both, and any
2 failure to obey such order of the court may be punished by
3 such court as a contempt thereof.

4 “(D) Any decision issued by the Secretary under this
5 subsection shall be subject to judicial review by the United
6 States court of appeals for the circuit in which such manu-
7 facturer resides or has his principal place of business, or the
8 United States Court of Appeals for the District of Colum-
9 bia Circuit, upon the filing in such court within thirty days
10 from the date of such decision of a petition by any person
11 aggrieved thereby praying that the decision be modified or
12 set aside in whole or in part. A copy of the petition shall
13 forthwith be sent by registered or certified mail to the
14 Secretary and thereupon the Secretary shall certify and file
15 in such court the record upon which the final decision com-
16 plained of was issued, as provided in section 2112 of title
17 28, United States Code. The court shall hear such petition on
18 the record made before the Secretary. The findings of the
19 Secretary, if supported by substantial evidence on the record
20 considered as a whole, shall be conclusive. The court may
21 affirm, vacate, or modify any decision of the Secretary and,
22 when appropriate, issue such process as may be necessary, or
23 may remand the proceedings to the Secretary for such
24 further actions as it may direct. The judgment of the court
25 shall be subject to review only by the Supreme Court of the

1 United States upon a writ of certiorari or certification as
2 provided in section 1254 of title 28, United States Code. The
3 commencement of a proceeding under this subparagraph shall
4 not operate as a stay of the final decision of the Secretary,
5 unless and until the court determines that the interests of
6 the public are best served by a stay of such final decision.

7 “(E) For purposes of enforcement of this title, author-
8 ized representatives of the Secretary, upon presenting appro-
9 priate credentials and written notice to the manufacturer or
10 his agent in charge, are authorized (1) to enter, at reason-
11 able time, any factory, warehouse, establishment, or other
12 facility of such manufacturer or dealer, in or at which such
13 vessels, vehicles, aircraft, or engines are manufactured, as-
14 sembled, or constructed, or are held for introduction into
15 commerce or are held for sale or resale after such introduc-
16 tion; and (2) to inspect, at reasonable times and in a reason-
17 able manner, such factory, warehouse, establishment, or
18 other facility and the vessels, vehicles, aircraft, and engines
19 therein. Each such inspection shall be commenced and com-
20 pleted with reasonable promptness.

21 “(F) Every manufacturer of such vessel, vehicle, air-
22 craft, or engine shall furnish to the dealer or, if appropriate,
23 to the ultimate purchaser at the time of delivery thereof by
24 such manufacturer a certification that such vessel, vehicle
25 aircraft, or engine conforms to all applicable standards issued

1 under this title. Such certification shall be in such form as to
2 be clearly visible and shall be permanently affixed thereto.

3 "MOTOR VEHICLE AND MOTOR VEHICLE ENGINE

4 COMPLIANCE TESTING

5 "SEC. 207. (a) Every manufacturer of a new vehicle
6 or new vehicle engine, or both, subject to the regulations
7 issued under section 202 of this title, shall, prior to the
8 delivery thereof to the dealer, or if appropriate, the ultimate
9 purchaser, test or cause to be tested such vehicles or engines
10 in accordance with good engineering practices and such regu-
11 lations as the Secretary may prescribe under this section, to
12 ascertain that such vehicles or engines will conform to the
13 applicable certificate issued under this title for the lifetime
14 emissions of such vehicle or engine. No certificate shall be
15 issued for such vehicles or engines under this title unless the
16 manufacturer has such a testing program.

17 "(b) The Secretary shall establish methods and proce-
18 dures for making tests under this section and inform the
19 manufacturers with respect thereto by regulation published
20 in the Federal Register, in accordance with section 553 of
21 title 5 of the United States Code. Such regulations adopted
22 by the Secretary prior to enactment of this sentence shall
23 continue in force until modified by him consistent with the
24 purposes of this section.

25 "(c) Every new vehicle or new vehicle engine of a

1 manufacturer introduced in commerce for sale or resale shall
2 be warranted to have installed and in operation systems or
3 devices for the control or reduction of air pollution agents or
4 combinations of such agents emitted from such vehicle or en-
5 gine, in conformance with applicable regulations issued under
6 this title, (1) that are substantially of the same construction
7 as systems or devices on test vehicles or test engines for which
8 a certificate has been issued to the manufacturer under this
9 title, and (2) that such systems or devices will be effective
10 for the lifetime emissions of such vehicles or engines if prop-
11 erly maintained, serviced, and operated. Normal service in
12 an urban area or its equivalent for one hundred thousand
13 miles or ten years, whichever is lesser, shall be taken as the
14 basis for lifetime emissions under this section. The manufac-
15 turer shall furnish with each vehicle or engine written instruc-
16 tions for necessary maintenance by the ultimate purchaser.
17 Such warranty shall apply to the ultimate purchaser and sub-
18 sequent purchasers thereof. In addition, the manufacturer
19 shall include on a label or tag permanently affixed to such
20 vehicle or engine such information relating to control of vehi-
21 cle emissions and compliance with this Act as the Secretary
22 shall prescribe by regulation. The actual cost to the manufac-
23 turer of such systems or devices and installation thereof and
24 warranty shall be disclosed in accordance with the provisions
25 of the Act of July 7, 1958 (15 U.S.C. 1231-1233).

1 “(d) (1) The Secretary shall conduct, or cause to be
2 conducted, such inspections, tests, studies, research, and in-
3 vestigations as may be necessary to determine whether any
4 class of new vehicles or new vehicle engines continue to con-
5 form to the regulations prescribed under section 202 of this
6 Act, after such vehicles or engines have been in operation,
7 for such period or number of miles as the Secretary may
8 deem appropriate. Any inspection of a new vehicle or new
9 vehicle engine, after its sale to the ultimate purchaser, shall
10 be made only if the owner of such vehicle or engine volun-
11 tarily permits such inspection to be made, except as may be
12 provided by any inspection program established pursuant to
13 this title.

14 “(2) If through testing, inspection, studies, or other in-
15 vestigation of statistically representative samples of any class
16 or category of vehicles or vehicle engines, or by other means,
17 the Secretary determines that such class or category of new
18 vehicles or new vehicle engines, operated under normal con-
19 ditions of maintenance and use, do not conform to the regula-
20 tions prescribed under section 202 or the certification issued
21 under this title, he shall immediately notify the manufacturer
22 thereof of such determination of nonconformity. The Secre-
23 tary shall publish such notice and, with reasonable specificity,
24 information concerning his determination of nonconformity in
25 the Federal Register as promptly as possible. The Secretary

1 shall within thirty days after such notice is issued afford the
2 manufacturer and other interested persons an opportunity to
3 present their views and evidence in support thereof at a pub-
4 lic hearing or in writing, with regard to such determination
5 of nonconformity. The Secretary shall, within a reasonable
6 time, but in no event more than sixty days from the date of
7 notice of nonconformity, order the manufacturer to provide
8 prompt notification of such nonconformity to the ultimate
9 purchaser and, if known, subsequent purchasers of all such
10 vehicles or vehicle engines included within the class or cate-
11 gory unless the Secretary, on the basis of all the facts and
12 evidence in the public record of such proceedings, shall con-
13 clude that the class or category of new vehicles or new
14 vehicle engines is in conformity with the regulation and cer-
15 tification and publish such conclusion together with the rea-
16 sons therefor in the Federal Register as promptly as possible.

17 “(e) (1) Every manufacturer of new vehicles or new
18 vehicle engines shall furnish notification of any defect in such
19 vehicle or engine produced by him, which he discovers dur-
20 ing the term of any warranty required by this title, and
21 which he determines, in good faith, causes or will cause such
22 vehicle or engine to be in nonconformity with such certifica-
23 tion or regulations, to the ultimate purchaser or subsequent
24 purchaser thereof (where known to the manufacturer) with-

1 in a reasonable time not to exceed sixty days after discovery
2 of such defect.

3 “(2) The notification required by this section shall be—

4 “(A) by certified mail to the last-known address
5 of the ultimate purchaser of such vehicle or engine, and
6 to any subsequent purchasers, if known, to whom has
7 been transferred any warranty required by this title;

8 “(B) by certified mail to the dealer of such vehicle
9 or engine; and

10 “(C) by such other expeditious and reasonable
11 means of informing purchasers thereof not known to the
12 manufacturer.

13 “(3) The notification to such purchasers provided for
14 in this subsection shall contain a clear description of the
15 nonconformity, a statement of measures to be taken to rem-
16 edy such nonconformity, and a commitment of the manu-
17 facturer to cause such nonconformity to be remedied at no
18 cost to the owner.

19 “(4) The manufacturer shall furnish, at the Secretary’s
20 request, copies of such notification.

21 “(f) The United States district court shall have juris-
22 diction to restrain violations of this section or any order of
23 the Secretary issued under this section, upon petition by the
24 Attorney General on behalf of the United States in accord-

1 ance with the applicable provisions of section 117 (a) (4) of
2 this Act.

3 “STATES GRANTS

4 “SEC. 208. (a) The Secretary is authorized to make
5 grants to appropriate State agencies in an amount up to
6 two-thirds of the cost of developing and maintaining effective
7 vehicle emission device and systems inspection and emission
8 testing and control programs, except that—

9 “(1) no grant shall be made for any part of any
10 State vehicle inspection program which does not directly
11 relate to the cost of the air pollution control aspects of
12 such a program; and

13 “(2) no such grant shall be made unless the Secre-
14 tary of Transportation has certified to the Secretary that
15 such program is consistent with any highway safety pro-
16 gram developed pursuant to section 402 of title 23 of the
17 United States Code.

18 “(b) Such grants shall be in addition to, not supplant,
19 existing funds of a State concerning air pollution control.

20 “RECORDS AND REPORTS

21 “SEC. 209. (a) Every manufacturer of a vessel, vehicle,
22 aircraft, or vessel, vehicle, or aircraft engine subject to the
23 provisions of this title shall establish and maintain such
24 records, make such reports, perform such tests, and provide
25 such information as the Secretary may reasonably require

1 to enable him to determine whether such manufacturer has
2 acted or is acting in compliance with this title and regulations
3 thereunder, and shall, upon request of an authorized rep-
4 resentative of the Secretary, permit such officer or employee
5 at reasonable times to have access to and copy such records.

6 “(b) Except for emission data, upon a showing satis-
7 factory to the Secretary by the person filing such records and
8 reports that such records or reports or portion thereof, if made
9 public, would divulge trade secrets or secret processes of such
10 person, the Secretary shall consider such records or reports
11 or portion thereof confidential to the purposes of section
12 1905 of title 18 of the United States Code, except that such
13 records or reports may be disclosed to other officers or em-
14 ployees concerned with carrying out this Act or when relev-
15 ant in any proceeding under this Act.

16 “STATE STANDARDS

17 “SEC. 210. (a) No State or any political subdivision
18 thereof shall adopt or attempt to enforce any standard re-
19 lating to the control of emissions from new vehicles, vessels,
20 aircraft, or new vehicle, vessel, or aircraft engines subject
21 to this title, except where such State demonstrates, after
22 public hearings, to the satisfaction of the Secretary that
23 more restrictive emissions for new vehicles or new vehicle
24 engines are required to implement national ambient air qual-
25 ity standards for any air quality region within such State.

1 No State shall require certification, inspection, or any other
2 approval relating to the control of emissions from any new
3 vehicle, vessel, or aircraft or new vehicle, vessel, or aircraft
4 engine as condition precedent to the initial retail sale to an
5 ultimate purchaser, titling (if any), or registration of such
6 vehicle, vessel, aircraft, or engine.

7 “(b) The Secretary shall, after notice and opportunity
8 for public hearing, waive application of this section to any
9 State which has adopted standards (other than crankcase
10 emission standards) for the control of emissions from new
11 motor vehicles or new motor vehicle engines prior to March
12 30, 1966, unless he finds that such State does not require
13 standards more stringent than applicable Federal standards
14 to meet compelling and extraordinary conditions or that such
15 State standards and accompanying enforcement procedures
16 are not consistent with section 202 of this title.

17 “(c) Nothing in this title shall preclude or deny to any
18 State or political subdivision thereof the right otherwise to
19 control, regulate, or restrict the use, operation, or movement
20 of registered or licensed motor vehicles, particularly such
21 controls, regulations, or restrictions necessary to achieve
22 compliance with national ambient air quality standards and
23 national ambient air quality goals established pursuant to
24 title I of this Act.

1 "USED VEHICLES

2 "SEC. 211. (a) (1) As soon as possible, after the en-
3 actment of this section, the Secretary shall promulgate Fed-
4 eral standards of performance for used vehicle emission con-
5 trol devices or systems designed to prevent or reduce air
6 pollution emissions from used motor vehicles.

7 "(2) As soon as possible after promulgation of the
8 standards required in paragraph (1) the Secretary shall
9 develop and publish in the Federal Register, in accordance
10 with section 553 of title 5 of the United States Code regula-
11 tions providing for certification and warranty of such devices
12 or systems. Such regulations shall consider the technical
13 feasibility of installing and maintaining in proper condition
14 such devices or systems or used vehicles or engines or class
15 thereof. The Secretary shall afford a reasonable opportunity
16 for interested persons to submit written comments thereon
17 and, after consideration thereof, shall promulgate such regu-
18 lations which shall become effective upon promulgation.

19 "(b) (1) No manufacturer of a device for application
20 on used vehicles shall sell, offer for sale, or introduce or de-
21 liver for introduction in interstate commerce, or import into
22 the United States for sale or resale any such device manu-
23 factured after the effective date of the standards and regula-
24 tions promulgated under this section unless such device is

1 in all material respects substantially the same as a test device
2 certified under this subsection.

3 “(2) Upon application of the manufacturer, the Secre-
4 tary shall so certify a used vehicle device if he determines, in
5 accordance with the provisions of this paragraph, that it
6 meets the appropriate standards and regulations promulgated
7 under this section. The Secretary shall test or require such
8 testing of the device as to standards of performance and for
9 such other purposes as may be appropriate. If the Secretary
10 determines that the device is satisfactory from the standpoint
11 of the procedures set forth and after consideration of the de-
12 sign, installation, operation, material, or other appropriate
13 factors, he shall certify the device. Any device manufac-
14 tured by such manufacturer which is in all material respects
15 substantially the same as the certified test device shall be
16 deemed to be in conformity with the appropriate standards
17 and regulations established under this section.

18 “(c) After the effective date of standards and regula-
19 tions promulgated under this section, it shall be unlawful—

20 “(1) for the manufacturer of any device subject to
21 such standards and regulations to sell or offer for sale,
22 or to distribute for sale any such device unless it is
23 in all material respects substantially the same as the
24 appropriate test device certified pursuant to this section;
25 or

1 “(2) for any person, prior to the sale or delivery of
2 a device subject to such standards and regulations to the
3 ultimate purchaser, wrongfully to remove or render
4 inoperative any certified device or element of design of
5 such device; or

6 “(3) for any person to fail or refuse to permit
7 access to or copying of records or to fail to make reports
8 or provide information required under this section; and

9 “(d) The district courts of the United States shall
10 have jurisdiction to restrain violators of subsection (c) of
11 this section. Actions to restrain such violators shall be brought
12 by, and in, the name of the United States. In any such
13 action, subpoenas for witnesses who are required to attend
14 a district court in any district may run into any other dis-
15 trict. In case of contumacy or refusal to obey a subpoena
16 served upon any person under this subsection, the district
17 court of the United States for any district in which such
18 person is found or resides or transacts business, upon appli-
19 cation by the United States and after notice to such person,
20 shall have jurisdiction to issue an order requiring such
21 person to appear and give testimony or to appear and pro-
22 duce documents, and any failure to obey such order of the
23 court may be punished by such court as a contempt thereof.

24 “(e) Any person who violates clause (2) of sub-
25 section (c) of this section shall be liable to a civil penalty

1 of not more than \$1,000 for each violation. Each violation
2 shall be a separate offense. No penalty shall be assessed
3 until the person charged shall have been given notice and
4 an opportunity for a hearing on such charge. In determin-
5 ing the amount of the penalty, or the amount agreed upon
6 in compromise, the gravity of the violation, and the demon-
7 strated good faith of the person charged in attempting to
8 achieve rapid compliance, after notification of a violation,
9 shall be considered by said Secretary.

10 "REGISTRATION AND REGULATION OF FUEL ADDITIVES

11 "SEC. 212. (a) The Secretary may from time to time
12 by regulation designate any fuel or fuels (including fuels used
13 for purposes other than vehicles), and, after such date
14 or dates as may be prescribed by him, no manufacturer or
15 processor of any such fuel may deliver any such fuel for
16 introduction into commerce or to another person who, it
17 can reasonably be expected, will deliver such fuel for such
18 introduction, unless (A) such fuel or fuel additive contained
19 therein has been registered in accordance with the require-
20 ments of subsection (c) (1) of this section, and (B) any
21 such fuel is in conformity with regulations established by
22 the Secretary in accordance with subsection (b) of this
23 section.

24 "(b) (1) The Secretary may, on the basis of information
25 obtained under subsection (c) of this section or any other

1 information available to him, by regulation prohibit the use
2 of any fuel which includes any components, including addi-
3 tives, in amounts which may contribute to emissions which
4 would endanger the public health or welfare or impair the
5 emission control performance of any vehicle or vehicle
6 engine which the Secretary finds would otherwise conform
7 to standards promulgated pursuant to section 202 of this
8 Act.

9 “(2) Prior to establishing any prohibition on the use
10 of any fuel which includes components, including additives,
11 in any amount in any fuel for purposes other than protection
12 of the public health or welfare, the Secretary shall find, and
13 publish such finding, that such standards are necessary for the
14 application of the most effective program of emission control
15 for new vehicles or new vehicle engines or certified used
16 vehicle devices or that such standards are necessary to achieve
17 the most economic alternative emission control performance
18 over the life of the vehicle, engine or device.

19 “(3) For the purpose of carrying out this section the
20 Secretary may prescribe regulations prohibiting the manufac-
21 ture for sale, the sale, the offering for sale, or the delivery of
22 any fuel in commerce.

23 “(c) (1) The Secretary may require the manufacturer
24 of any fuel or fuel additive to furnish such information as is
25 reasonable and necessary to determine the emissions resulting

1 from the use of the fuel or fuel additive or the effect of such
2 fuel or fuel additive on the emission control performance of
3 any vehicle or vehicle engine which the Secretary finds
4 would otherwise conform to standards promulgated pursuant
5 to section 202 of this Act. If the Secretary determines that
6 additional information is necessary to identify the effects of
7 such emissions on public health or welfare, he may require
8 data as the Secretary may reasonably prescribe to enable him
9 data as the Secretary may reasonable prescribe to enable him
10 to determine the extent to which such emissions will ad-
11 versely affect the public health or welfare. Among other
12 types of information, the Secretary shall require—

13 “(A) the manufacturer of such fuel to notify him as
14 to the commercial identifying name and manufacturer of
15 any additive contained in such fuel; the range of con-
16 centration of such additive or additives in the fuel; and
17 the purpose-in-use of such additive; and

18 “(B) the manufacturer of any such additive to notify
19 him as to the chemical composition of such additive or
20 additives as indicated by compliance with clause (A)
21 of this paragraph, the description of any analytical tech-
22 nique that can be used to detect and measure such
23 additive in fuel, the recommended range of concen-
24 tration of such additive, and the recommended purpose

1 in use of such additive, and the chemical structure of
2 such additive or additives.

3 Upon compliance with the provision of this subsection in-
4 cluding assurances that any changes in the information
5 required will be provided to the Secretary, the Secretary shall
6 register such fuel or fuel additive.

7 “(2) In obtaining information under this subsection,
8 the Secretary may sign and issue subpoenas for the deposition
9 of relevant persons and the production of relevant records,
10 reports, and documents, and administer oaths. In case of
11 contumacy or refusal to obey a subpoena served upon any
12 person under this paragraph, the district court of the United
13 States for any district in which such person is found or
14 resides or transacts business, upon application by the United
15 States and after notice to such person, shall have jurisdiction
16 to issue an order requiring such person to appear and give
17 testimony before the Secretary or to appear and produce
18 documents before the Secretary, or both, and any failure
19 to obey such order of the court may be punished by such
20 court as a contempt thereof. Upon a showing satisfactory
21 to the Secretary by the person filing or submitting such
22 information that such information or portion thereof, if made
23 public, would divulge trade secrets or secret processes of
24 such person, the Secretary shall consider such information
25 or portion thereof confidential for the purposes of section

1 1905 of title 18 of the United States Code, except that
2 such information may be disclosed to other officers or em-
3 ployees of the United States concerned with carrying out
4 this Act or when relevant in any proceeding under this
5 title. The Secretary shall make available any such informa-
6 tion which is not so considered confidential and which will
7 contribute to scientific or public understanding of the rela-
8 tionship between the components of such fuels and their
9 contribution to the problem of air pollution.

10 “(d) Any person who violates subsection (a) or sub-
11 section (b) of this title shall forfeit and pay to the United
12 States a civil penalty of \$10,000 for each and every day
13 of the continuance of such violation, which shall accrue to
14 the United States and be recovered in a civil suit in the
15 name of the United States, brought in the district where
16 such person has his principal office or in any district in which
17 he does business. The Secretary may, upon application there-
18 for, remit or mitigate any forfeiture provided for in this
19 subsection and he shall have authority to determine the facts
20 upon all such applications.

21 “(e) It shall be the duty of the various United States
22 attorneys, under the direction of the Attorney General of
23 the United States, to prosecute for the recovery of such for-
24 feitures.

25 “(f) Regulations issued under this section and section

1 211 shall be published in the Federal Register, in accord-
2 ance with section 553 of title 5 of the United State Code,
3 and shall afford interested persons a reasonable period to
4 submit written comments thereon.”

5 SEC. 9. The Clean Air Act is amended by adding after
6 section 212 the following new sections:

7 “DEVELOPMENT OF LOW-EMISSION VEHICLES

8 “SEC. 213. In order to encourage research and
9 promote the development of low-emission vehicles the Sec-
10 retary is authorized to—

11 “(1) prescribe special low-emission standards for
12 any class or classes of vehicles or engines not subject
13 to section 202 (e) ;

14 “(2) provide testing procedures to determine if
15 vehicles and engines meet such standards; and

16 “(3) certify vehicles or engines meeting such stand-
17 ards as low-emission vehicles or engines for the purpose
18 of this section.

19 “DEFINITIONS

20 “SEC. 213. For the purpose of this title, the term—

21 “(1) ‘vessel’ means every description of watercraft
22 or other artificial contrivance used, or capable of being
23 used, as a means of commercial transportation in water;

24 “(2) ‘vessel engine’ means an engine used for the
25 propulsion of a vessel and located either therein or sepa-

1 rated therefrom, but is intended for such use, and includes
2 all parts, appurtenances, and accessories thereof;

3 “(3) ‘aircraft’ means any contrivance now known
4 or hereinafter invented, used, or designed for navigation
5 of, or flight in, the air;

6 “(4) ‘aircraft engine’ means an engine used, or in-
7 tended to be used, for propulsion of aircraft and located
8 either therein or separated therefrom, but is intended
9 for such use, and includes all parts, appurtenances, and
10 accessories thereof;

11 “(5) ‘vehicle’ means any self-propelled vehicle de-
12 signed for transporting persons or property on a road,
13 street, parkway, or highway or on rails, or for agricultural
14 use;

15 “(6) ‘vehicle engine’ means an engine used for the
16 propulsion of a vehicle or motor vehicle and located
17 therein or separated therefrom, but is intended for such
18 use, and includes all parts, appurtenances, and accessories
19 thereof;

20 “(7) ‘new’ when applied to a vessel, aircraft, or
21 vehicle, or vessel, aircraft, or vehicle engine means that
22 the equitable or legal title thereto has not, under applica-
23 ble law has been transferred to an ultimate purchaser,
24 except that with respect to vessels, aircraft, or vehicles,
25 or vessels, aircraft, or vehicle engines imported or offered

1 for importation, such term shall mean a vessel, aircraft,
2 or vehicle, or vessel, aircraft, or vehicle engine imported
3 into the United States on or after the day following the
4 date of enactment of this paragraph;

5 “(8) ‘ultimate purchaser’ means the first person
6 who in good faith purchases a new vessel, aircraft, or
7 vehicle, or a new vessel, aircraft, or vehicle engine for
8 purposes other than resale;

9 “(9) ‘commercial’ means any business activity of
10 any kind or description by any person engaged in trade
11 or commerce;

12 “(10) ‘manufacturer’ as used in this title, except
13 section 212, means any person engaged in the manu-
14 facturing or assembling of new vessels, aircraft, or ve-
15 hicles, or new vessel, aircraft, or vehicle engines, or im-
16 porting such vessels, aircraft, vehicles, or engines for
17 resale, or who acts for, and is under the control of, any
18 such person in connection with the distribution of such
19 vessels, aircraft, vehicles, or engines, but shall not include
20 any dealer;

21 “(11) ‘owner or operator’ means any person who
22 owns, leases, operates, controls, or supervises a vessel,
23 aircraft, or vehicle or engine thereof;

24 “(12) ‘commerce’ means trade, traffic, commerce,
25 transportation, or communication among the several

1 States, or between a place in a State and any place out-
2 side thereof, or within the District of Columbia or a
3 possession of the United States, or between points in
4 the same State but through a point outside thereof;

5 “(13) ‘public vessel or aircraft’ means a vessel or
6 aircraft owned or chartered and operated by the United
7 States, by a State or political subdivision thereof, or by
8 a foreign nation, except when such vessel or aircraft is
9 engaged in commerce for commercial purposes.”

10 SEC. 10. (a) The Clean Air Act is amended by redesign-
11 nating sections 303 through 310 as sections 309 through
12 317.

13 (b) The Clean Air Act is amended by inserting after
14 section 302 the following new sections to read as follows:

15 “EMERGENCY POWERS

16 “SEC. 303. Notwithstanding any other provision of this
17 Act, the Secretary, upon receipt of evidence that a pollu-
18 tion source or combination of sources (including moving
19 sources) is presenting an imminent and substantial en-
20 dangerment to the health of persons, and that appropriate
21 State or local authorities have not acted to abate such
22 sources, may bring suit on behalf of the United States in
23 the appropriate United States district court to immediately
24 enjoin any person causing or contributing to the alleged
25 pollution to stop the emission of air pollution agents or

1 combination of such agents causing or contributing to such
2 pollution or to take such other action as may be necessary.

3 "CITIZEN SUITS

4 "SEC. 304. (a) (1) In furtherance of the purpose of
5 this Act to protect the public health and welfare and control
6 air pollution, the district courts of the United States shall
7 have original jurisdiction, regardless of the amount in con-
8 troversy or the citizenship of the parties, to enforce, or to
9 require the enforcement of, the provisions of this Act includ-
10 ing any applicable schedule or timetable of compliance, emis-
11 sion requirement, standard of performance, emission stand-
12 ard, or prohibition established pursuant to this Act. Civil
13 actions for such enforcement, or to require such enforcement,
14 may be brought by one or more persons, (A) against any
15 person, including, but not limited to, a governmental instru-
16 mentality or agency, where there is alleged a violation by
17 such person of any such provision, standard, or requirement,
18 or (B) against the Secretary where there is alleged a failure
19 of the Secretary to exercise (i) his authority to enforce
20 standards established under sections 113, 114, 115, or 117
21 of this Act; or (ii) any duty established by this Act. In any
22 such action the court may grant such relief, temporary or
23 permanent, as may be necessary to carry into effect such
24 provisions, standards, or requirements.

25 " (2) Nothing in this section shall affect the right of such

1 persons as a class or as individuals under any other law to
2 seek enforcement of such standards or any other relief.

3 “(3) Prior to instituting any suit, under this subsec-
4 tion, such person or persons shall, by certified or registered
5 mail or personal service, notify (A) the Secretary, (B) an
6 authorized representative of the Secretary, if any, in the
7 field office responsible for the area in which the alleged
8 violation occurs, and (C) an authorized representative of the
9 air pollution control agency of the State in which the alleged
10 violation occurs, of such alleged violation. No such suit shall
11 be filed unless such person or persons shall have afforded the
12 Secretary, his representative, or such agency, at least thirty
13 days from the receipt of such notice to institute enforcement
14 proceedings under this title to abate such alleged violation;
15 except any action under this section to abate a violation of
16 (i) an order issued by the Secretary pursuant to section
17 117, (ii) clause (A) or (B) of section 113(g)(1),
18 (iii) section 114(e)(1), or (iv) section 115, may be
19 undertaken, after notice, without regard to the time limita-
20 tions of this subsection. In any such action, the Secretary, if
21 not a party, may intervene for the purpose of presenting
22 evidence on the question of any alleged violation of this Act.

23 “(b) The court, in issuing any order in any action
24 brought pursuant to subsection (a) of this section may
25 award costs of litigation, including reasonable attorney and

1 expert witness fees whenever the court determines such
2 action is in the public interest.

3 "APPEARANCE

4 "SEC. 305. In actions instituted under this Act, subject to
5 the direction and control of the Attorney General, as provided
6 in section 507 (b) of title 28 of the United States Code, attor-
7 neys appointed by the Secretary may appear for and rep-
8 resent him.

9 "FEDERAL PROCUREMENT

10 "SEC. 306. (a) Any person (1) required to comply
11 with a order issued by a Federal court pursuant to section
12 112, 113, 114, 116, or 117 of this Act who fails to comply
13 within the time period specified in such order, or (2) con-
14 victed by a Federal court for a knowing violation of any
15 applicable schedule or timetable of compliance, emission
16 requirement, prohibition, emission standard, or standard of
17 performance, shall be ineligible to enter into any contract with
18 any Federal agency for the procurement of goods, materials,
19 and services to perform such work at or with any facilities
20 owned, leased, or supervised by such person which are
21 subject to such action by the court. Such ineligibility shall
22 continue under clause (1) of this subsection until the Secre-
23 tary certifies compliance with such order, or under clause
24 (2) of this subsection, for a period of one year following the

1 date on which such agency receives notice of such conviction
2 from the Secretary.

3 “(b) The Secretary shall establish procedures to pro-
4 vide all such Federal agencies with the notification necessary
5 for the purposes of subsection (a) of this section.

6 “(c) In order to further implement the purposes and
7 policy of this Act to protect and enhance the quality of
8 the Nation’s air, the President shall, not more than one
9 hundred and eighty days after enactment of this section
10 cause to be issued an order (A) requiring each Federal
11 agency authorized to enter into contracts and each Federal
12 agency which is empowered to extend Federal assistance by
13 way of grant, loan, or contract to effectuate the purpose and
14 policy of this Act in such contracting or assistance activi-
15 ties, and (B) setting forth procedures, sanctions, penalties,
16 and such other provisions, as the President determines
17 necessary to carry out such requirement.

18 “(d) The President may exempt any contract, loan,
19 or grant from all or part of the provisions of this section
20 where he determines such exemption is necessary in the
21 paramount interest of the United States and he shall notify
22 the Congress of such exemption.

23 “(e) The President shall annually report to the Congress
24 on measures taken toward implementing the purpose and

1 intent of this section, including but not limited to the pro-
2 gress and problems associated with implementation of this
3 section.

4 "EMPLOYEE PROTECTION

5 "SEC. 307. (a) No person shall discharge or in any other
6 way discriminate against or cause to be discharged or dis-
7 criminated against any employee or any authorized represent-
8 ative of employees of any alleged violator by reason of the
9 fact that such employee or representative has filed, instituted,
10 or caused to be filed or instituted any proceeding under this
11 Act, or has testified or is about to testify in any proceeding
12 resulting from the administration or enforcement of the
13 provisions of this Act.

14 "(b) Any employee or a representative of employees
15 who believes that he has been discharged or otherwise dis-
16 criminated against by any person in violation of subsec-
17 tion (a) of this section may within thirty days after
18 such violation occurs, apply to the Secretary of Labor for a
19 review of such alleged discharge or discrimination. A copy
20 of the application shall be sent to such person who shall be
21 the respondent. Upon receipt of such application, the Secre-
22 tary of Labor shall cause such investigation to be made as he
23 deems appropriate. Such investigation shall provide an op-
24 portunity for a public hearing at the request of any party
25 to enable the parties to present information relating to such

1 violation. The parties shall be given written notice of the
2 time and place of the hearing at least five days prior to the
3 hearing. Any such hearing shall be of record and shall be
4 subject to section 554 of title 5 of the United States Code.
5 Upon receiving the report of such investigation, the Secre-
6 tary of Labor shall make findings of fact. If he finds that
7 such violation did occur, he shall issue a decision, incorporat-
8 ing an order therein, requiring the person committing such
9 violation to take such affirmative action to abate the viola-
10 tion as the Secretary of Labor deems appropriate, includ-
11 ing, but not limited to, the rehiring or reinstatement of the
12 employee or representative of employees to his former posi-
13 tion with compensation. If he finds that there was no such
14 violation, he shall issue an order denying the application.
15 Such order issued by the Secretary of Labor under this sub-
16 paragraph shall be subject to judicial review in accordance
17 with this subsection. Violations by any person of subsection
18 (a) of this section shall be subject to the provisions of sec-
19 tion 117 (a) (4).

20 “(c) Whenever an order is issued under this paragraph,
21 at the request of the applicant, a sum equal to the aggregate
22 amount of all costs and expenses (including the attorney’s
23 fees) as determined by the Secretary of Labor to have been
24 reasonably incurred by the applicant for, or in connection
25 with, the institution and prosecution of such proceedings,

1 shall be assessed against the person committing the
2 violation.

3 "REVIEW

4 "SEC. 308. (a) The Secretary shall review any matter
5 relating to duties and responsibilities granted pursuant to this
6 Act contained in any (1) detailed statement prepared by
7 any agency or Department of the Federal Government pur-
8 suant to Public Law 91-190, and (2) proposed regulations
9 published by any agency or Department of the Federal Gov-
10 ernment pursuant to any statutory authority.

11 " (b) In the event the Secretary determines that such
12 detailed statement or such proposed regulations is unsatisfac-
13 tory from the standpoint of public health or welfare or en-
14 vironmental quality, the matter shall be referred to the
15 Council on Environmental Quality for a determination and
16 recommendation to the President which shall be made
17 public."

18 SEC. 11. Redesignated section 316 of the Clean Air Act
19 is amended by striking out "and \$134,300,000 for the fiscal
20 year ending June 30, 1970" and inserting in lieu thereof
21 \$000,000,000 for the fiscal year ending June 30, 1971,
22 \$000,000,000 for the fiscal year ending June 30, 1972, and
23 \$000,000,000 for the fiscal year ending June 30, 1973."

24 SEC. 12. The Clean Air Act is amended by adding at
25 the end thereof a new title to read as follows:

1 “TITLE IV—NOISE POLLUTION

2 “SEC. 401. This title may be cited as the ‘Noise Pollu-
3 tion and Abatement Act of 1970’.

4 “SEC. 402. (a) The Secretary shall establish within the
5 Department of Health, Education, and Welfare an Office of
6 Noise Abatement and Control, and shall carry out through
7 such Office a full and complete investigation and study of
8 noise and its effect on the public health and welfare in order
9 to determine—

10 “ (1) effects at various levels;

11 “ (2) projected growth of noise levels in urban areas
12 through the year 2000;

13 “ (3) the psychological and physiological effect on
14 humans;

15 “ (4) effects of sporadic extreme noise (such as jet
16 noise near airports) as compared with constant noise;

17 “ (5) effect on wildlife and property (including
18 values) ;

19 “ (6) effect of sonic booms on property (including
20 values) ; and

21 “ (7) such other matters as may be of interest in
22 the public welfare.

23 “ (b) In conducting such investigation, the Secretary shall
24 hold public hearings, conduct research, experiments, demon-
25 strations, and studies. The Secretary shall report the results

1 of such investigation and study, together with his recom-
2 mendations for legislation or other action, to the President
3 and the Congress not later than one year after the date of
4 enactment of this title.

5 “(c) In any case where any Federal department or
6 agency is carrying out or sponsoring any activity resulting in
7 noise which the Secretary determines amounts to a public
8 nuisance or is otherwise objectionable, such department or
9 agency shall consult with the Secretary to determine pos-
10 sible means of abating such noise.

11 “SEC. 403. There is authorized to be appropriated such
12 amount, not to exceed \$30,000,000, as may be necessary for
13 the purposes of this title.”

AIR POLLUTION—1970

AIR TRANSPORT INDUSTRY

AIR TRANSPORT INDUSTRY OBJECTIONS TO SECTIONS 111 AND 112 OF S. 3229 AS AMENDED

The airlines are disturbed greatly by certain provisions in the proposed Committee amendments to the Clean Air Act, originally introduced as S. 3229. Specifically, Sections 111 and 112 appear to conflict with, or at the very least, confuse the preemption authority of the Federal government with respect to aircraft emissions provided in Section 210. In addition, Section 111 can be construed as authorizing the abridgement of Title VI and Section 401(e) of the Federal Aviation Act of 1958.

Section 111 requires each State to submit for approval by the Secretary a plan to implement, maintain, and enforce national ambient air quality standards and goals. States are required as a condition to such approval, to include in the plan "appropriate procedures, including . . . air and surface transportation controls and permits, for insuring that any source of air pollution agents . . . will be located, designed constructed, equipped and operated" so as not to interfere with the standards or goals (Sec. 111(a)(2)(D)).

Section 112 authorizes any state, political subdivision, intermunicipal or interstate agency to adopt or revise plans, including emission requirements, to implement a stricter air quality program than that promulgated by the Secretary, or to implement such plan in a shorter time than that set forth in the Act.

EFFECT OF SECTION 111

As indicated above, under Section 111 the states are required to affirmatively set forth procedures for air transportation controls and permits. Based upon the Constitutional requirement that interstate commerce regulation be vested in the Federal government, Section 401 (e) (1) of the Federal Aviation Act states that the Civil Aeronautics Board shall certificate terminal points, intermediate points, and service to be rendered by carriers, and such reasonable terms, conditions, and limitations as the public interest may require. In addition, Section 401 (e) (4) states that "No term, condition, or limitation of a certificate shall restrict the right of an air carrier to add to or change schedules, equipment, accommodations, and facilities . . . as the development of the business and the demands of the public shall require. . . ." Thus, Section 111 would allow a state, for example, to curtail flights into that state for pollution control purposes, even though the Civil Aeronautics Board has exclusive jurisdiction over interstate air service, and even though Section 210 of the bill purportedly preempts to the Federal government control over aircraft emissions. Also, since Section 111 refers to air transportation "controls", this could be construed as attempting to take the authority over air traffic control away from the Federal Aviation Administration.

EFFECT OF SECTION 112

This section, as previously indicated, authorizes states to adopt emission requirements, standards and plans which are more stringent than Federal ones. This immediately clouds the unequivocal statement of preemption by the Federal government in Section 210, relating to vessels, vehicles, aircraft, and their engines. It could be argued that Title I of the Act does not affect vessels, vehicles and aircraft, and that Section 112 is specifically limited in its application to Title I. That may have been the case in the original Clean Air Act, but the amendatory language of Section 111 specifically speaks of air and surface transportation controls and permits. Thus, the clarity of Section 210 turns into ambiguity.

CONCLUSION

Senate Public Works Committee staff have indicated that the states must be able, in an air pollution emergency, to shut down or restrict any pollutant source including aircraft. This may be necessary, provided there are adequate Federal controls. But it is not necessary to give the states, through the Secretary of HEW, by *sub silentio* abrogation of the Federal Aviation Act, the authority to control or restrict interstate air transportation. We urge that Section 111 of the bill be changed to eliminate any such requirement in the implementation plans submitted to the Secretary.

In addition, we urge that the language of Section 112 be clarified either through amendment to that section or in the Report, to remove the existing ambiguity relating to Federal preemption in the case of aircraft emission standards.

AMERICAN FEDERATION OF LABOR—CONGRESS OF INDUSTRIAL
ORGANIZATIONS

AMERICAN FEDERATION OF LABOR AND
CONGRESS OF INDUSTRIAL ORGANIZATIONS,
Washington, D.C., August 31, 1970.

HON. JENNINGS RANDOLPH,
*Chairman, Senate Public Works Committee,
U.S. Senate,
Washington, D.C.*

DEAR MR. CHAIRMAN: On behalf of the AFL-CIO, I urge you most strongly to support the recent action of the Subcommittee on Air and Water Pollution in broadening and strengthening existing federal air pollution control programs, and vote against any weakening amendments.

We cite in particular the provisions in the subcommittee bill dealing with the following:

1. Requiring the 1980 automobile emission standards be met by 1975.
2. Requiring the automotive industry to provide a 100,000 mile warranty of adequate performance of its smog control equipment.
3. National stationary source emission standards in new major industrial plants.
4. Development of smog control testing devices for cars on the road to be used by state government inspection programs.
5. Elimination of emission of any pollutants by new and existing industries if such pollutants are extremely hazardous to health. This would be of great assistance in organized labor's fight to clean up the hazards faced by millions of workers where they are occupationally exposed to a wide range of toxic materials, most of them airborne.
6. Requiring that national air quality standards include development of land use plans, traffic control measures, emission controls, enforcement, mass transit and other means to reduce air pollution on a local or regional basis.

One of the major accomplishments that can be expected from the subcommittee bill is that of stopping the industrial blackmail to which workers are subjected by industries which threaten to leave or do leave states or areas with tough anti-pollution programs to those which do not.

Sincerely yours,

ANDREW J. BIEMILLER,
Department of Legislation.

AMERICAN MINING CONGRESS

AMERICAN MINING CONGRESS,
August 26, 1970.

Mr. RICHARD GRUNDY,
*Professional Staff Member, Senate Committee on Public Works, New Senate Office
Building, Washington, D.C.*

DEAR DICK: We appreciate very much the opportunity to informally comment on the latest draft of the National Air quality Standards Act of 1970. Comments which are set up below are meant to be helpful to you in your deliberations. However, they should not be construed as representing the final position of the American Mining Congress, nor should they be considered to be the only objections which we might have to the proposed legislation especially when it is considered by a conference committee.

(1) PAGE 10, LINES 11-22—PROPOSED SECTION 109(b)(1)

We notice that in the revision of the paragraph on the issuance of pollution control techniques, you have omitted the statement "such recommendations shall include such data as are available on the latest available technology and economic feasibility of alternative methods of prevention and control of air contamination including cost-effectiveness analyses." We strongly urge that this sentence be retained. Without it, air pollution control agencies may require the use of pollution control methods which would be so expensive as to cause plants to close from lack of financial ability to meet such requirements.

(2) PAGE 12, LINES 16-17—PROPOSED SECTION 110(b)(a)

The cited lines indicate that the Secretary "shall publish proposed national ambient air quality goals." It is not clear from the language of the bill as to how "goals" differ from "standards" which are required earlier in Section 110.

(3) PAGES 13, LINES 22-24—PROPOSED SECTION 111 (2)(A)

The lines cited provide for a period of three years from the date of approval of the state implementation plan for the attainment of national ambient air quality standards. This period of time seems unreasonably short. In most instances, it will take from 5 to 6 years for an air pollution control facility to actually become operable. Such a facility must, of course, go through a number of stages such as preparation of plans, pilot plant operation and finally full scale operation. In addition, there is always the possibility that once full scale operation is reached, the facility will not do the job for which it is intended. Thus, it would seem more realistic to have 5 or 6 years rather than 3 years as in the proposed legislation.

(4) PAGE 13, LINE 25 AND PAGE 14, LINES 1-3—PROPOSED SECTION 111(2)(B)

This portion of the bill indicates that the state implementation plan will be approved by the Secretary of HEW if he determines that it "includes emission requirements, schedules and timetables of compliance, and such other measures as necessary to insure attainment of any applicable ambient air quality standards and goal." It seems to us that it may not always be necessary that the implementation plan include all three of the factors mentioned. We would thus suggest that the word "and" in line one on page 14 be changed to "or."

(5) PAGE 16, LINES 5-8—PROPOSED SUBSECTION 111(a)(2)(K)

These lines indicate that the public hearings of the state must be held "to consider adoption of ambient air quality standards *more restrictive* than the national ambient air quality standards." We do not understand why it would be necessary in every instance for a state to hold hearings on more restrictive standards than those set by the federal government. In many states, it would seem that the national ambient air quality standards would be sufficient, especially if the state is not highly industrialized. Thus, we would suggest the phrase "more restrictive than" be deleted and the phrase "at least equal to" be substituted.

(6) PAGE 20—PROPOSED SECTION 113

This section of the proposed legislation would provide for "new source standards of performance."

As a general observation, the definition of "stationary source" and "new source" both seem quite broad and would mean that most new sources of pollution would be covered by the proposed legislation. Thus, in the stationary source definition, the "endangerment of the public health or welfare" is mentioned. Also, new source would cover a "modification". It is apparent that a section such as section 113 is going to place a very heavy burden on existing air pollution control agencies. It would seem preferable to limit this as much as possible in the beginning. Thus, we would suggest that in the definition of stationary source the phrase "public health or welfare" be changed to "public health and welfare". Also, we would suggest that in the definition of new source, the word "modification" be deleted, and the definition of modification be deleted later in the section.

One of the most serious difficulties we have with this section is the sentence on page 21, lines 20-24, which reads as follows: "Such standards shall be based on the greatest degree of emission control which the Secretary determines to be achievable through application of the latest available control technology, processes, operating methods, or other alternatives."

In the past, industry has encountered considerable problems with control officials concerning the phrase "latest available control technology". It would seem that this phrase ought to be defined in the proposed legislation. It appears that as the phrase is used by control officials—it means little more than "technically proven in the laboratory" whereas industry considers the phrase to mean "commercially proven technology".

Also, Section 113 (b)(4) states that "The Secretary may distinguish among classes, types, and sizes within categories of new sources for the purpose of establishing such standards." It is not clear what is meant by "classes, types and sizes".

(7) PAGES 26-30—PROPOSED SECTION 114

It is unclear to us as to why this section is needed in view of the extensive new authority conferred upon the Secretary, especially that proposed in new Section 113.

(8) PROPOSED SECTION 304—CITIZENS SUITS

This section as drafted represents an improvement over other proposals for class action suits in the environmental field. However, it is suggested that the right of suit be limited to suits against governmental instrumentalities or agencies. Thus, lines 8 through 11 could be amended to read as follows: "(A) against any governmental instrumentality or agency, where there is alleged a violation by any person of any such provision, standard, or requirement." Our members believe that this section, as it now stands, could lead to harassment and to suits brought for frivolous purposes.

(9) SECTION 306—FEDERAL PROCUREMENT

While the objective of this section is certainly desirable, it is the belief of our members that the section may very well prove unworkable from an administrative viewpoint. It could result in the inability of the government to procure essential commodities.

Again, thank you for affording us this occasion to informally express the views of our members concerning this important legislation.

Sincerely,

JAMES D. KITTELTON,
Director, Environmental Activities.

AUTOMOBILE MANUFACTURERS ASSOCIATION

AUTOMOBILE MANUFACTURERS ASSOCIATION, INC.,
Washington, D.C., August 27, 1970.

Hon. EDMUND S. MUSKIE,
U.S. Senate, Washington, D.C.

DEAR SENATOR MUSKIE: We have as you suggested, expressed our point of view to HEW. Enclosed is a copy of my letter to Secretary Richardson. I am taking the liberty of giving copies to members of the Public Works Committee.

Again I want to thank you for taking time from your busy schedule to hear our story.

With respect and good wishes,
Sincerely,

Tom
THOMAS C. MANN.

AUTOMOBILE MANUFACTURERS ASSOCIATION, INC.,
Washington, D.C., August 27, 1970.

Hon. ELLIOT L. RICHARDSON,
Secretary of Health, Education, and Welfare, Department of Health, Education, and Welfare, Washington, D.C.

DEAR MR. SECRETARY: As you know, proposed amendments to the Senate Clean Air Act are about to be reported out of committee. This bill in its present form proposes drastic reduction in auto emission levels for 1975 as compared with the already stringent HEW goals for 1975. Automobile manufacturers have clearly stated to Senator Muskie that, based on current technology and foreseeable advances, they cannot achieve the levels proposed in the bill by that date.

In Senator Muskie's meeting with presidents and other officials of automobile companies on August 25, 1970, it became apparent that the proposed reduction of 1970 emission levels by 90% on 1975 model vehicles is primarily based on the attached document, a copy of which was supplied by the Senator's staff.

It is our understanding that the information from HEW contained in this document was reported in a paper entitled "Federal Motor Vehicle Emission Goals for CO, HC and NOx based on Desired Air Quality Levels", which I understand was used in a presentation by D. S. Barth, J. C. Romanovsky and E. A. Schuck of your Durham office at a June 16, 1970 annual meeting in St. Louis of the Air Pollution Control Association. It was made manifestly clear in the paper that the measurements, math models, data analysis and conclusions are of a developmental or a preliminary nature and not intended to be construed as final or adequate for establishing legal standards.

It is also our understanding that the information supplied by HEW staff is currently being evaluated by NAPCA and should not be considered definitive or official until after review and the required publications in the Federal Register.

We are concerned that major legislative proposals concerning emissions standards embodying serious social and economic consequences are based on technical information supplied by HEW staff which has not received the rigorous technical scrutiny customary in HEW. We respectfully request that you personally review the material supplied by your department to Senate staff and, if you share our views concerning the nature of the data, that you promptly inform Senator Muskie.

Sincerely,

THOMAS C. MANN.

[Enclosure]

JUNE 11, 1970.

From: Staff.

Subject: Automobile Emissions Control and Achievement of the Ambient Air Standard necessary to protect health.

Communications were held with the National Air Pollution Control Administration for the purpose of determining how long it would take to achieve a national ambient air standard related to health, with particular emphasis on the relation-

ship of automobile emissions to the achievement of such standard. Automobiles contribute three particular pollutants in great quantities (a) carbon monoxide, (b) photochemical oxidants (hydrocarbons), and (c) oxides of nitrogen.

A. The ambient standard necessary to protect the public health from carbon monoxide is 8-10 ppm. This compares to existing ambient air in Chicago, for instance, of 44 ppm. The 1970 Federal emission standard for automobiles for carbon monoxide is 23 gm/mile. To achieve the public health ambient standard would require emission controls placed on automobiles permitting emissions of only 5 grams per mile; a figure that represents the 1980 emission requirement as proposed by the Administration. In order to achieve sufficient replacement of automobiles with autos having the emission controls meeting 1980 standards it will take an estimated ten years. Therefore on assumptions of present programs it will be 1990 before carbon monoxide levels will be brought down to the public health ambient standard. This is premised, it must be emphasized, on reliance exclusively on automobile emission controls and reliance upon proposed levels of controls and their rate of application.

B. The ambient air health standard for photochemical oxidants (hydrocarbons) is 0.06 ppm. To achieve such ambient standard would require a reduction of hydrocarbon emissions from automobiles from the 1970 standard of 2.2 gm/mile to an emission level of 0.2 gm/mile. This last figure is the approximate equivalent of the proposed 1980 emission standard. With the replacement factor and again relying exclusively on emission control it would be 1990 before the ambient health standard could be achieved.

C. The ambient health standard for NO_x is anticipated to be about 0.10 ppm. This compares with an ambient condition found in most metropolitan of 50.0 to 60.0 ppm. To achieve the health standard would require a reduction from the proposed 1973 emission standard of 3.0 grams per mile to an emissions requirement for automobiles of 0.45 grams per mile, or approximately the proposed 1980 standard. The replacement factor would again, if reliance is placed only upon emission control of this character, result in ambient health standards not being met until 1990.

AUGUST 27, 1970.

[Response to preceding letter appears on p. 1596.]

MEMORANDUM

Subject: Committee Print No. 1, dated August 25, 1970—A Bill to Amend the Clean Air Act.

In view of time schedules which did not permit open hearings on new and important provisions in Committee Print No. 1, I am enclosing, for your consideration, memoranda covering a number of points in the subject bill which are of concern to the Automobile Manufacturers Association. Also enclosed is language which we believe would incorporate the points of view contained in these memoranda.

This material was delivered to the staff of the Senate Committee on Public Works yesterday.

At the request of Chrysler Corporation, I am also enclosing a paper which describes its views on the preemption provisions of the subject bill. Other companies presumably will present their views on this particular provision separately.

THOMAS C. MANN,
President, Automobile Manufacturers Association.

AUGUST 29, 1970.

CHECK LIST

Section 202 (e)(1)—Standards.

Section 203 (b)(3)—Export Label.

Section 206 (a)(4)—Certificate of Conformity.

Section 207 (c)—Sticker Announcement of Actual Cost of Emission Control System.

Section 207 (d)(2)—Defect Notification.

Section 207 (e)(1)—Defect Notification by Manufacturer.

Section 207 (e)(3)—Defect Description in Notification.

Section 214—Effective Dates.

Section 304—Citizen Suits.

Proposed Revised SECTION 202(e)(1) [FIRST VERSION]

(e)(1) On or before January 1, 1972, if the Secretary determines that in order to meet national air quality standards previously established under Section 110 of this Act it is necessary to promulgate more stringent performance levels for any new light duty motor vehicle or any new light duty motor vehicle engine than those previously established by him to become effective for the model year 1975, and that it is technologically feasible to do so, the Secretary shall establish more stringent standards for such model year.

Note: If adopted, the first clause of Section 202(a) * * * should be modified to read: "(a) * * * *Subject to the provisions of subsection (e)*" etc.

Proposed Revised SECTION 202(e)(1) [SECOND VERSION]

(e)(1) On or before January 1, 1972, if the Secretary determines that in order to meet national ambient air quality standards previously established under Section 110 of this Act it is necessary to promulgate more stringent performance levels for any new light duty motor vehicle or any new light duty motor vehicle engine than those previously established by him to become effective for the model year 1975, and that it is achievable through application of the latest available technology, the Secretary shall establish more stringent standards for such model year.

In making his findings the Secretary shall evaluate the anticipated performance of such vehicle or engine over its lifetime and other alternatives available to attain and maintain the national ambient air quality standards established under this Act.

Note: If adopted, the first clause of Section 202(a) * * * should be modified to read: "(a) * * * *Subject to the provisions of subsection (e)*" etc.

[Memorandum]

1. SECTION 202(e)(1) *Legislative Acceleration of HEW 1980 Standards to become effective in 1975 model year* HEW has proposed but has not yet finally adopted emission standards for the 1975 model year. Goals for the 1980 model year have been announced, but HEW is far from adopting final standards for that year. Nevertheless, Section 202(e)(1) requires in effect that levels even below the 1980 goals be achieved in the 1975 model year despite the lack of any final administrative determination that either the 1975 or 1980 goals are technologically feasible or required to meet national air quality standards (which themselves have not yet been promulgated).

It seems doubtful legislative policy for Congress to set mandatory emission control standards by specific deadlines regardless of whether they can in fact be met or need to be met and without considering the complex technological and scientific data necessary to make these decisions.

It presently appears that it will simply not be possible for vehicle manufacturers to achieve the control levels specified in the bill with any fossil fuel-burning engine—including steam, gas turbines, etc., as well as internal combustion engines. All technology known to the automobile industry indicates this to be the fact. In view of this, manufacturers unable to meet the control levels specified in the bill would be forced to shut down, unless provided with emergency standards relaxation by Congress. Limited utility electric vehicles, which would shift the problem to stationary power-generating sources, would not be any solution.

Moreover, the desired air quality objectives expressed by the bill could be achieved by the 1975 and 1980 goals already announced by the government. The reductions from 1960 uncontrolled levels that would be achieved by the 1975 and 1980 federal goals and the levels specified in the bill compare as follows:

[In percent]

	Hydrocarbon	Carbon monoxide	Oxides of nitrogen	Particulates
1975 proposed Federal.....	95	86.0	83	67
1975 committee bill.....	98	97.5	90	90
1980 Federal goals.....	97	94.0	93	90

The constitutionality of any such provisions would be in serious doubt. On policy and legal grounds it would seem wiser for the Congress to emphasize its desire to have the Secretary set more stringent standards as soon as feasible by a provision along the lines of the attached substitute for Section 202(c)(1). It provides that if the Secretary determines that in order to meet national air quality standards it is necessary to promulgate more stringent performance levels than those he may previously establish for the model year 1975, and that it is technologically feasible to do so, he may establish more stringent standards on or before January 1972—the minimum lead time necessary to provide manufacturers with an opportunity to attempt to comply.

PROPOSED REVISED SECTION 203(b)(3)

“(3) A new motor vehicle or new motor vehicle engine intended solely for export, and so labeled or tagged on the outside of the container and on the vehicle or engine itself, shall not be subject to the provisions of subsection (a).

PROPOSED NEW SECTION 206(a)(4)

Any new *vessel*, vehicle, or aircraft, or new *vessel*, vehicle, or *aircraft engine* sold by such manufacturer which is in all material respects substantially the same construction as the test vessel, vehicle, or aircraft, or new vessel, vehicle, or aircraft engine for which a certificate has been issued under subsection (1) *and is in effect*, shall for the purposes of this Act be deemed to be in conformity with the regulations issued under section 202 of this title.

[Memorandum]

SECTION 206 Certification

Under Section 206 (b) of the Clean Air Act any new motor vehicle or engine which is in all material respects substantially the same construction as a test vehicle or engine certified by the Secretary is deemed to be in conformity with emission standard regulations issued under Section 202. This provision has been deleted from the new bill, leaving in doubt the significance of a certification by the Secretary.

The House bill, which also deleted the existing Section 206 (b), avoided this serious ambiguity by defining as a prohibited act under Section 203 (a)(1) the sale of a motor vehicle or engine not covered by a certificate. (Each certificate covers a specific classification of vehicle or engine.) The present Senate bill, however, makes it a prohibited act to sell a vehicle or engine which is not in conformity with the standards issued under Section 202. No reference is made to the Secretary's certificate. Thus, even though each individual vehicle or engine sold by the manufacturer falls within a specific classification previously certified by the Secretary, the manufacturer is left in doubt whether this is sufficient to establish compliance with the law. Read literally, the language of Section 203 in the present bill would make it impossible for a manufacturer to determine whether each vehicle sold violated the act unless before sale each vehicle was successfully tested in the same manner as the certified prototype and met the applicable standards in all respects. Individual testing of each vehicle or engine to this extent (including 4,000 miles of actual operation) would be an obvious impracticability. To correct this deficiency Section 206 (b) of the present act should be restored.

Amend SECTION 207(c) to read as follows:

“(c) Every new vehicle or new vehicle engine of a manufacturer introduced in commerce for sale or resale shall be warranted to have installed and in operation systems or devices for the control or reduction of air pollution agents or combinations of such agents emitted from such vehicle or engine, in conformance with applicable regulations issued under this title * * * that are substantially of the same construction as systems or devices on test vehicles or test engines for which a certificate has been issued to the manufacturer under this title. The manufacturer shall furnish with each vehicle or engine written instructions for necessary maintenance by the ultimate purchaser. Such warranty shall apply to the ultimate purchaser and subsequent purchasers thereof. In addition, the manufacturer shall include on a label or tag permanently affixed to such vehicle or engine such information relating to control of vehicle emissions and compliance with this Act as the Secretary shall prescribe by regulation.

SECTION 207 Warranty of Lifetime Performance and Recall and Replacement for Failure of Lifetime Performance

This section imposes an impossible burden on manufacturers. With respect to any hardware which might be invented to meet the 1975 proposed standards, the statute requires manufacturers to develop and install such new devices and

systems which by definition have never been through the experience of lifetime performance. Any such devices and systems can only be built and warranted to meet specifications related to predicted performance tests which can be and are made before the devices and systems are manufactured and sold.

If it should develop that the pre-certification and pre-sale tests do not correctly predict lifetime performance, the only practicable remedy is to devise more accurate pre-production and pre-sale tests for future models. It is not reasonable and may well be unconstitutional to require a manufacturer to warrant and replace that which he has no present method of predicting and covering in his prices.

In any event, and this applies particularly to the systems which will be used between now and 1975, the circumstances of maintenance and use of individual vehicles over their lifetimes vary enormously, and in the case of individual failures there is no conceivable way for a manufacturer or a court to determine whether the failure resulted because of the subsequent acts or omissions of its operators.

Manufacturers cannot prescribe a maintenance system at this time with any assurance that it would be effective to prevent *some* deterioration of performance on all cars. Even assuming an owner faithfully followed all maintenance instructions, there would still be some vehicles which, with deterioration, would test outside applicable standards. However, the difference between the standards and actual performance probably would not be great enough to have any real effect on ambient air.

Accordingly, Section 207 should be confined to the warranty set forth in Subsection 1 (page 57, line 6).

Section 207 (d), relating to recall and replacement of nonconforming vehicles, should be limited to defects, such as failure to be of substantially the same construction as test vehicles, and should exclude lifetime performance.

SECTION 207(c) *Sticker Announcement of Actual Cost of Emission Control System.* The last sentence of this section requires that the actual cost to the manufacturer of emission control systems and devices, their installation and the required warranty be disclosed in accordance with the provisions of the 1958 price sticker law.

This provision misconceives the purpose of the 1958 law and would impose unreasonable burdens on the manufacturer without benefit to the public. The 1958 law requires disclosure of the manufacturer's suggested retail price for the basic vehicle and for each optional accessory, so as to clearly inform the customer of the suggested prices for optional items and the basic vehicle. It deals with suggested prices, not with actual costs. It also serves the purpose of informing the customer how much he can save by not ordering an optional item that he does not need to serve his personal transportation desires. For this reason it does not require separate pricing of components of the basic vehicle, none of which can be optionally eliminated by either the manufacturer or retail purchaser.

Moreover, the calculation of "actual cost" of the numerous items, designs and other features built into the engine, power train and exhaust system for the purpose of reducing emissions is impossible. For emission control and other reasons, the gas tank and the entire fuel system, the entire carburetor, cylinder block and head and distributor, which actually are multiple-purpose components, have been redesigned in recent years.

This also has involved many related components, including the transmission. Everything having to do with the propulsion of the car is affected—from the storage of the fuel to the intake of air to the combustion process and the release of the products of combustion. There is no identifiable and separate component of the car that controls emissions. The redesign and modifications required vary from make to make and even from model to model within a make depending principally upon the nature of the specific engine-transmission package.

In summary, all of the components which are changed for emission control purposes serve other essential functions in the automobile. In fact, the other functions are the primary functions for which they are included on the car—the propulsion of the vehicle. There is no one particular way of deciding how much of a given change in an engine or carburetor represents the "actual cost" of emission control and how much was undertaken for other purposes. As a result, any cost figures computed would necessarily be highly arbitrary—depending upon individual judgments and the particular cost allocation procedures of the individual manufacturer.

It would be equally impossible to determine the cost of warranty applied to particular components (e.g. engines or exhaust systems) attributable to emission

control problems. This would be true even after the fact, and the suggestion that this could be done before any warranty expenditures had been made indicates a total lack of understanding of the automobile, itself, and the problem of emission control.

[FIRST VERSION]

Amend Section 207 (d) (2) to read as follows:

"(2) If through testing, inspection, studies, or other investigation of statistically representative samples of any class or category of vehicles or vehicle engines, or by other means, the Secretary *has reason to believe* * * * that such class or category of new vehicles or new vehicle engines, *is not substantially of the same construction as systems or devices on test vehicles or test engines for which a certificate has been issued to the manufacturer under this title or otherwise contains a manufacturing defect, with the effect of causing such class or category of new vehicles or new vehicle engines to be in substantial nonconformity with applicable standards,* * * * he shall immediately notify the manufacturer thereof of such determination of a defect and *furnish the manufacturer with all information on which such preliminary finding is based.* * * * The Secretary shall within thirty days after such notice is issued afford the manufacturer and other interested persons an opportunity to present their views and evidence in support thereof at a public hearing or in writing, with regard to such *preliminary finding of a defect.* * * * The Secretary shall, within a reasonable time, but in no event more than sixty days from the date of notice of a defect, * * * order the manufacturer to provide prompt notification of such defect * * * to the ultimate purchaser and, if known, subsequent purchasers of all such vehicles or vehicle engines included within the class or category unless the Secretary, on the basis of all the facts and evidence in the public record of such proceedings, shall conclude that the class or category of new vehicles or new vehicle engines is *not defective so as to be in substantial nonconformity* * * *.

[SECOND VERSION]

Amend Section 207(d) (2) to read as follows:

"(2) If through testing, inspection, studies, or other investigation of statistically representative samples of any class or category of vehicles or vehicle engines, or by other means, the Secretary has reason to believe that such class or category of new vehicles or new vehicle engines is not substantially of the same construction as systems or devices on test vehicles or test engines for which a certificate has been issued to the manufacturer under this title or otherwise contains an identifiable defect in design or manufacture, with the effect of causing the average of emissions from such class or category of new vehicles or new vehicle engines to be in substantial nonconformity with standards applicable to new vehicles or engines of that class or category, he shall immediately notify the manufacturer thereof of such determination of a defect and furnish the manufacturer with all information on which such preliminary finding is based. The Secretary shall within thirty days after such notice is issued afford the manufacturer and other interested persons an opportunity to present their views and evidence in support thereof at a public hearing or in writing, with regard to such preliminary finding of a defect. The Secretary shall, within a reasonable time, but in no event more than sixty days from the date of notice of a defect, order the manufacturer to provide prompt notification of such defect to the ultimate purchaser and, if known, subsequent purchasers of all such vehicles or vehicle engines included within the class or category unless the Secretary, on the basis of all the facts and evidence in the public record of such proceedings, shall conclude either that the class or category of new vehicles or new vehicle engines is not defective so as to be in substantial nonconformity or that there is no appropriate remedy for such defect.

[FIRST VERSION]

Amend section 207 (e) (1) and (3) to read as follows:

"(e) (1) Every manufacturer of new vehicles or new vehicle engines shall furnish notification of any *manufacturing* defect in such vehicle or engine produced by him, which he discovers during the term of any warranty required by this title, and which he determines, in good faith, causes or will cause such vehicle or engine to be in *substantial* nonconformity with such certification * * * to the ultimate purchaser or subsequent purchaser thereof (where known to the manufacturer) within a reasonable time *after such determination.* * * *

"(3) The notification to such purchasers provided for in this subsection shall contain a clear description of the defect * * * a statement of measures to be taken to remedy such defect * * *, and a commitment of the manufacturer to cause such defect * * * to be remedied at no cost to the owner.

[SECOND VERSION]

207 (e) (1) Whenever any manufacturer of new vehicles or new vehicle engines determines in good faith that any class or category of new vehicles or new vehicle engines is not substantially of the same construction as systems or devices on test vehicles or test engines for which a certificate has been issued to the manufacturer under this title or otherwise contains an identifiable defect in design or manufacture, with the effect of causing the average of emissions from such class or category of new vehicles or new vehicle engines to be in substantial nonconformity with standards applicable to new vehicles or engines of that class or category, he shall furnish notice thereof, within a reasonable time after such determination, to the ultimate purchaser or subsequent purchasers thereof (where known to the manufacturer) whenever there is an appropriate remedy for such defect.

Amend Section 207(e)(3) to read as follows:

"(3) The notification to such purchasers provided for in this subsection shall contain a clear description of the defect, a statement of measures to be taken to remedy such defect, and a commitment of the manufacturer to cause such defect to be remedied at the expense of the manufacturer.

New Section 214:

The amendments made by sections 206(b)(4)(F), 207(c), 207(d) and 207(e) shall apply in the case of motor vehicles and motor vehicle engines manufactured after the nintieth day after the enactment of this Act.

[Memorandum]

Effective Dates. Most of the provisions of Title II do not become effective until HEW issues some form of regulation and those regulations will include a provision as to when they become effective. However, several requirements in Title II do not depend upon any intervening action by HEW and thus presumably would require action by vehicle manufacturers as soon as the bill is enacted. This is the case with respect to the certification by manufacturers of compliance to standards under Section 206(b)(4)(F), warranty under Section 207(c), disclosure of cost on the price sticker under Section 207(c). The bill should include a provision making those requirements effective 90 days after enactment of the bill in order to provide manufacturers with sufficient time to take the necessary internal steps and prepare documents to comply with those requirements.

Citizens Suits

Delete all of Section 304 or in the alternative amend Section 304 (a) (1) by adding "Title I of" in line 9 on page 76 so that line 9 will read as follows:

"require the enforcement of the provisions of *Title I of* this act include—".

[Memorandum]

Section 304 Citizens Suits

This section, authorizing citizens to bring suits to enforce any standard issued under the Act or to compel the Secretary to perform any duty created by the Act, will make efficient and certain administration of automotive emissions regulations virtually impossible.

To provide any reasonable possibility of compliance, automotive emissions standards establishing more stringent levels must be finally fixed in all respects including test procedures at least two years before the production run of the applicable model year begins. If during this essential two year lead time period the standards are placed in doubt by a citizens suit against the Secretary claiming that he failed to set sufficiently stringent standards, manufacturers will be left in doubt as to what their course of conduct should be. If they prepared for compliance and the citizen suit succeeds, their efforts will be wasted. If they await the outcome of the citizen suit and the suit fails, the Secretary will necessarily have to delay the effective date of his proposed standard, to the injury of the public.

Equally serious problems are raised by the possibility of citizens suits to punish or enjoin alleged violations of existing standards. In the administration of new, highly technical regulatory statutes, manufacturers must necessarily work out

with the agency technical interpretations of what the regulations mean, how they are to be enforced and what the applicable test and inspection procedures are to be. If manufacturers cannot rely on interpretations made and practices followed by the agency—if such reliance can be upset after the fact by a citizens enforcement suit, effective day to day compliance with the agency's regulations will be made infinitely more difficult.

No reason has been suggested why, in the absence of citizens suits, the Secretary would fail to perform his duties under the Act, or why in the event of a violation the Secretary and attorney general would fail to take the necessary enforcement measure. Citizen complaints to the regulatory authorities may be helpful; a multitude of citizens attorneys general bringing enforcement suits in the courts are more likely to be harmful. No other federal regulatory statute is enforced in such a helter skelter manner. The effective regulation of air pollution is too critical for such an experiment. If the Section is not deleted, it should at the very least be limited to violations of Title I relating to national air quality standards and stationary sources, as to which the complex lead time and enforcement problems described above may be less serious.

Federal Preemption

The reasons that led Congress in 1967 to provide for federal preemption in the Air Quality Act are still valid today.

The specific exception granted to California was because of its pioneering efforts in this area and may be viewed as similar to other "Grandfather clauses." In addition, California was in the unique position of having a great deal of experience and technical know-how in this area as well as having some very special problems which were not then, and are not now prevalent throughout the country, due to atmospheric and geographic conditions. We anticipate that as the federal government moves more into the automobile emissions field and develops more expertise, the predominance of California in automotive emission controls will diminish. We think this trend may already be evidenced by HEW's denial of California's most recent waiver request in anticipation that the 1975 federal standards would be at least as stringent as California's.

AMA believes that the automotive air pollution problem can best be handled on a national basis, because of the great mobility of the automobile and the mass production problems associated with the automotive industry. Although the Clean Air Act designates air quality regions, it must be emphasized that these regions relate to stationary as opposed to mobile emissions sources. In addition, these regions may extend across state boundaries.

Controls of stationary sources of pollution are inherently more amenable to regional regulation. On the other hand, motor vehicles in most cases will not be manufactured in the state purporting to regulate them. In the recent debate on the 1970 Clean Air Act Amendments, Representative Rogers, in advancing federal preemption of regulation by states, said: "Automobiles are moving emission sources. In other words, they go from one state to another. That is why we are approaching it in this manner and not allowing one state to set a high standard and another not to do likewise . . . We want the Secretary to impose those strict standards all over the nation. We give him this authority in the bill." (Congressional Record, 91st Congress, 2d session, June 10, 1970, p. H. 5380, H. 5379.)

Some of the potential cost penalties to purchasers of cars in states that might have their own standards—in the absence of federal preemption—were noted in the debate on the 1967 Clean Air Act by Representative Springer, who stated: "It is not possible from an economic point of view to build automobiles to 50 different standards. Even if this were so, it is very unrealistic since automobiles necessarily travel from state to state. It is only sensible to have one national standard." (Congressional Record, Vol 113, part 23, 90th Congress, 1st session, November 2, 1967 p. 30950.)

Clearly, the logic of Representative Springer's remarks is even more persuasive should air quality regions or major cities, as well as the individual states, be allowed to adopt more stringent emission standards. The possibility of hundreds of different standards would be wholly unrealistic from an economic standpoint.

If the various states, cities, or air quality regions of the U.S. were authorized to establish their own emission standards applicable to new motor vehicles, a myriad of problems will necessarily arise. For instance, one automobile manufacturer indicates that on 1970 models it had 67 different models of carburetors and 60 different models of distributors exclusive of those required to meet California air pollution control standards. Should another state adopt pollution control standards, the number of carburetor models would be approximately doubled

and the number of distributors increased by one-half. Without knowing the precise emission standards each state might adopt, it is difficult to pinpoint the exact magnitude of this problem. However, it is clear that the problem would be critical and of immense proportions.

It should be recognized that the existing preemption provisions are quite narrow and of limited applicability. Section 208 of the Clean Air Act of 1967 only preempts the power of the states to establish emission standards for *new* motor vehicles or *new* motor vehicle engines. Section 208(c) reserves for the states the right to regulate motor vehicles in all other respects including emission standards for vehicles in *use*.

The federal government is living up to its responsibilities to regulate automobile emissions on a national basis. Recent HEW proposals cover new emission requirements for 1972 and goals through 1975. According to HEW, such action will sufficiently control the problem of vehicle emissions even in those most populous states or areas where vehicle emissions are claimed to be the most severe.

COLLIER, SHANNON, RILL, AND EDWARDS

MEMORANDUM OF LAW

Re Summary Analysis of Citizen Suit Provisions of National Air Quality Standards Act of 1970 (§ 304)

Section 304 of the National Air Quality Amendments of 1970, as it appears in Committee Print No. 1¹ would authorize private persons to initiate civil actions in the U.S. District Courts for the enforcement, or to secure the enforcement, of various provisions of the Act. The proposal represents a substantial improvement over the citizen class suit provisions of S. 3546. It seems clear that suits under § 304 would be limited to actions for injunctive relief, and that damages and private redress might not be recovered thereunder.² Moreover, provision is made for actions to be filed, at the plaintiff's option, against government agencies, including the Secretary, in certain appropriate cases. Prospective plaintiffs would be required to afford the enforcement agencies thirty days' notice prior to the initiation of an action, except as to certain enumerated claims, and the Secretary would be given a limited right of intervention in private actions. Finally, provision is made for the award of costs, including attorneys fees and expert witness fees, to either party if the court determines that such award is in the public interest.

Even accepting the basic thrust of § 304, however, a number of questions arise. Considered herein in sequence, they are:

- (1) Class Actions;
- (2) Nature of Actions Which May Be Initiated by Private Persons;
- (3) Notice;
- (4) Multiple Suits Including the Government;
- (5) Multiple Suits Not Including the Government;
- (6) Voluntary Settlement;
- (7) Costs.

I. CLASS ACTIONS

It may be that the proposed provision for actions to be brought "by one or more persons" (Committee Print No. 1, p. 66, line 8) is designed to preclude class actions. There is substantial question whether this condition adequately accomplishes the objective.

Rule 23, Fed. R. Civ. P., provides that one or more members of a class may sue as representative parties on behalf of all. Were section 304 to be enacted in its present form, "one or more persons" could initiate an action claiming to represent a class under Rule 23. Nothing in § 304 would specifically preclude such suits. The language is somewhat parallel to that in § 4 of the Clayton Act, which authorizes any "person" injured in his trade or business by a violation of the antitrust laws to initiate civil actions thereunder. Class actions under the antitrust laws are, of course, commonplace.

The elimination of diversity and jurisdictional amount conditions, of course, overcomes any barriers to federal class suits which might result from the Supreme Court's decision in *Snyder v. Harris*, 394 U.S. 332 (1969).

Private attorneys might for a variety of reasons be motivated to initiate class actions, rather than single or joint party suits, even if only injunctive relief is available. There may be some benefit in establishing the image of the litigation as a "big" case. The geographic boundaries of the case might more readily be enlarged through use of the class action device. And the greater aura of complexity which can be made to surround the litigation, the greater the likelihood of a substantial award of attorneys fees.

¹ The legislation is presently unnumbered. Reference herein will be to "Committee Print No. 1".

² There is some question whether private parties could sue to enforce civil penalties or to cause the initiation of criminal proceedings. See, II, *infra*.

II. NATURE OF ACTIONS WHICH MAY BE INITIATED BY PRIVATE PERSONS

Although § 304 appears designed to limit citizens' suits to actions for injunctive relief, certain other possibilities are present. Examination of these possibilities suggest some revision of the section to express with specificity the types of practices upon which private litigation may be based.

A. ACTIONS AGAINST ANY PERSON

Section 304 would provide for vesting in the District Courts jurisdiction to enforce, "the provisions of this Act including any applicable schedule or timetable of compliance, emission requirement, standard of performance, emission standard, or prohibition established pursuant to this Act." Committee Print No. 1, p. 66, lines 2-6. The inclusive language does not appear to limit the broad jurisdictional grant conferred by the term "the provisions of this Act." Authorization to private persons for the initiation of civil actions seems equally broad, requiring only an allegation that *any such provision*, standard or requirement has been violated. Under a broad construction, § 304 would permit citizens' suits against persons and government agencies as follows:³

(1) Actions under § 111(a)(1) to require the states to submit implementation plans. The legislative design contemplates the issuance by the Secretary of such a plan should the state fail to submit a proposal or if a state's proposed plan does not conform to federal standards. Under § 111(a)(1), however, the submission of a plan by the states appears mandatory, and their failure to do so may be construed as a violation of the Act.

(2) Actions under § 113(g)(1)(A) against operation of a new source without certification. The legislation would authorize the Secretary to assess civil penalties of \$5,000 for such violations in administrative proceedings and would further authorize the filing of district court actions by the Secretary under § 113(g)(2) and § 117(a)(4)(B).⁴ It may be at least arguable that § 304 would authorize private persons to seek enforcement of civil penalties, thereby intruding upon a discretionary administrative determination of the Secretary. If, in fact, the Secretary, elects one of the two courses of remedy, it may be that the private litigant could pursue the other.

(3) Actions related to violations of performance standards by certified sources under § 113(g)(1)(B). Such violations may be attacked by the Secretary in administrative proceedings under § 117(a)(2), in civil actions under § 117(a)(4)(B), and, if the offense is committed knowingly, through criminal prosecutions under § 117(b)(c). Although it is extremely doubtful that a private litigant could initiate criminal or administrative proceedings, his initiation of a civil action may well interfere with the Secretary's following either of the other two courses.

(4) Actions related to non-performance of obligations under § 113(g)(1)(c). As in the case of § 113(g)(1)(A) offenses, the Secretary may seek to impose civil penalties or may seek injunctive relief against such discrepancies. The decision to initiate either of such actions is peculiarly in the province of the Secretary, since the responsibilities and duties therein set forth are designed to facilitate his enforcement of the section. Nevertheless, private parties may be empowered to initiate actions, for example, to require the provision of information to the Secretary. Such actions would constitute an unreasonable and unnecessary burden on the judicial system.

(5) Actions related to violations of emission standards under § 114(e)(1). Such violations are subject to administrative orders under § 117(a)(2), to court actions under § 117(a)(4)(B) and, if committed with knowledge, to criminal prosecutions under § 117(b). Civil actions by private litigants may interfere with the enforcement option or options selected by the Secretary.

(6) Actions related to non-performance of obligations under § 114(e)(2). The same considerations and principles applicable to private actions under § 113(g)(1)(c) are here applicable;

(7) Actions related to violations of prohibitions or emission standards under § 115(c). Such violations would be subject to civil actions initiated by the Secretary under § 115(c) and § 117(a)(4)(B) and, if committed knowingly, to criminal prosecution under § 117(b)(B)(ii). In addition to creating potential disruption of

³ Consideration herein is given only to alleged Title I violations. Were violations of Title II considered, the list of possible actions would be substantially enlarged. It is also assumed that actions against the Secretary are limited to those which might be brought under § 304(a)(1)(B) and, therefore, that the Secretary, his representatives and any successor agency do not constitute agencies within the meaning of § 304(a)(1)(A).

⁴ "Requirement" as used in § 117(a)(4)(B) apparently relates to the prohibitions of the cited sections, not to emission requirements.

the Secretary's enforcement program, authorization of class actions under § 115 raises the possibility that sanctions broader than injunctive relief might be imposed. That provision would empower the courts to issue "appropriate" orders in addition to injunctions and further would provide, "[e]ach court shall have jurisdiction to provide such relief as may be appropriate." The contention might be made in a private civil action that an order for the payment of damages would constitute an appropriate order.⁵

(8) Actions against private persons or state agencies to enforce emission requirements, schedules and timetables of compliance and all other provisions of implementation plans adopted pursuant to § 111. Violations of such plans may subject the offender to administrative orders of the Secretary, in the event a state is not satisfactorily administering such plan, and to criminal prosecution in the event of a knowing violation of a schedule or timetable or emission requirement. The capacity for multiple litigation derived from this section is almost limitless.

B. ACTIONS AGAINST THE SECRETARY

Under § 304, actions which may be initiated by private persons against the Secretary fall in two categories: actions to require that he exercise his authority to enforce standards established under §§ 113-115 and 117; and actions to require his exercise of any duty established by the Act. The extent to which actions can be initiated under the first category to restrict election by the Secretary of enforcement options is uncertain. The types of actions which appear authorized under the second category are almost infinite.

(1) Actions under § 304(a)(1)(B)(i).—It appears that civil actions against the Secretary under this category of authorization would be limited to those compelling his enforcement of performance standards (§ 113) and emission standards (§§ 114 and 115). No other standards would be established under the cited sections. Section 117 does not provide for the establishment of any standards but rather for the enforcement of standards through a variety of administrative and judicial procedures.

If private actions under clause (i) are to be limited to such standards there remains serious question as to the extent to which private persons can and should be able to control the Secretary's enforcement hand. For example, should the Secretary elect to proceed by administrative order to enjoin the knowing violation of a performance standard, could a private suit force him also to seek the initiation of criminal proceedings? Similar problems are involved as to actions against the Secretary based on violations of §§ 114 and 115.

Should the word "standards" be intended to convey a broader meaning, serious interpretive issues are presented. In its widest reach, "standards" could cover virtually every provision of the cited sections.

(2) Actions under § 304(a)(1)(B)(ii).—A mere enumeration of some of the types of private suits which might be filed against the Secretary requiring his exercise of any "duty" under the Act illustrates the complexity and interference with the administrative process inherent in this authorization. Such actions might include, but not be limited to, suits,⁶

- (i) to require the designation of air quality control regions;
- (ii) to require the publication of lists and additions to lists under § 109(a);
- (iii) to require the inclusion or exclusion of various provisions in ambient air quality standards and goals;
- (iv) to require the disapproval of implementation plans submitted by the states under § 111;
- (v) to require revision of state plans under § 111(d);
- (vi) to require addition of categories of stationary sources to lists published under § 113(b)(1);
- (vii) to require additions to or modifications of performance standards promulgated under § 113(b)(2);
- (viii) to require additions to or modifications of certification procedures under § 113(d);
- (ix) to require the Secretary to withhold certification from the states or to suspend state certification authority;

⁵ An action for damages would necessitate a jury trial under U.S. Const., Amendment VII. *Beacon Theaters, Inc. v. Westover*, 359 U.S. 500 (1959) is authority that where claims for legal and equitable relief are mixed, the legal issues must first be determined before a jury. In the absence of an action by the Secretary, or if an action is filed by the Secretary and consolidated with a private damage action, the imposition of needed equitable relief may be interminably delayed.

⁶ As with II, A, *supra*, consideration is not herein given to possible actions under Title II.

- (x) to require the addition of agents or combinations of agents to lists published under § 114(b);
- (xi) to require additions to or modification of emission standards promulgated under § 114(c)(1);
- (xii) to require review and revision of emission standards under § 114(c)(2);
- (xiii) to require the Secretary to withhold delegation of enforcement authority to the states § 114(i);
- (xiv) to require additions to lists of agents or combinations of agents under § 115(a)(1);
- (xv) to require the promulgation of a prohibition under § 115(a)(2);
- (xvi) to require the revision or modification of emission standards issued under § 115(a)(3);
- (xvii) to require the Secretary to compel the furnishing of records or information or the installation of equipment or procedures under §§ 113(f) and 114(d);
- (xviii) to require the initiation of enforcement proceedings as specified in § 304(a)(1)(B)(i).

III. NOTICE

Section 304(a)(3) would require 30-days notice to the Secretary, his authorized representative and the authorized representative of the appropriate state pollution control agency by prospective plaintiffs prior to the initiation of certain civil actions. The notice provision contains several shortcomings.

Thirty days is an inordinately abbreviated period of time within which the Secretary or state agency can reasonably be expected to review the allegations, conduct an investigation and initiate action, if any is appropriate. By contrast, S. 3201 as approved by the Senate Commerce Committee would accord the enforcement agencies up to 180 days after notice to take action in the relatively less complicated area of unfair consumer practices. A 30-day notice provision would lead either to a proliferation of citizens' suits or a larger number of ill-considered protective suits by the agencies in the technologically complex air pollution field.

No notice or waiting period whatever would apply to private actions under §§ 113(g)(1)(A) or (B), 114(c)(1) or 115 or actions to abate violations the Secretary's orders issued under § 117. The Secretary and enforcement agencies would thereby be deprived of the first opportunity to enforce these provisions in a manner consistent with the total program of administration.

No provision is made, moreover, for the form and content of such notice. Undoubtedly, among legitimate complaints are innumerable crank letters which are and would be received by the state agencies. Would the mere fact that some might be sent by registered mail or hand delivered satisfy the notice requirements of § 304? If so, such notice might not even come to the attention of the appropriate authority which would initiate effective enforcement action. Yet no provision is made in the proposals for the notice to identify prospective defendants, to identify the practices involved in the alleged violation or alleged nonfeasance of the Secretary, to cite the section or sections of the Act under which plaintiffs intend to proceed, to describe the relief to be sought, or to designate the forum in which the civil action might be initiated.

Finally, no provision is made for notice to be given private persons or corporations which might be subject to suit. Absence of such notice could preclude prelitigation settlements which would avoid undue burdens on both the courts and the Secretary.

IV. MULTIPLE SUITS INCLUDING THE GOVERNMENT

The draft legislation fails to prescribe the effect on private complaints of the initiation of a government enforcement action either within or beyond the thirty-day notice period, if applicable. No standards are provided in the case of a government action initiated with regard to those sections of the Act as to which the notice requirements do not apply. Finally, the proposal does not deal with the situation where a government enforcement action is pending at the time notice is given.

The legislative plan necessarily contemplates virtually exclusive administration and enforcement of the Act through a federal-state cooperative program. Proposed section 304 is at cross-purposes with this plan.

The Secretary and the state enforcement agencies are the appropriate representatives of the national interest and of the interests of private persons under the

Act. It is for these government agencies to select the best tools available for enforcement of the Act without ill-considered interference through private litigation.

Intolerable situations could arise even in the relationship between private suits and actions by the federal government. Assume that the federal government, having become aware of a violation of a performance standard under § 113, initiates a proceeding under § 117(a)(2) which will culminate in an administrative preventive order. The alleged violator is not contesting the entry of an order. Dissatisfied private persons might nevertheless initiate a court action for abatement, without notice, as would be authorized under the legislation. Two proceedings under the same provision, one judicial and one administrative, would be running a parallel course to the confusion of the air quality control program, the needless congestion of the courts and the unnecessary inconvenience of the parties.

Similarly, assume that subsequent to initiation of a private civil action under § 115, the federal government files an abatement action under § 115(c). Dissatisfied with the appropriateness of the relief requested in the government suit, the private parties continue to pursue their litigation.⁷ Nothing in the bill would prevent them from doing so. The legislation does not even make provision for a stay of the private action or actions and their consolidation with government litigation. And, perforce, no provision is made for control of such litigation by the Secretary if such consolidation were to be effected.

Innumerable other illustrations of the potentially adverse effect of § 304 on the coherent administration of the program could be developed by considering the various sections of the Act under which private suits could be brought and the various relationships between the notice provision and time at which government action is initiated.

The problem becomes more complex when its impact on state enforcement programs is considered. Assume that within the thirty-day notice period a state files proceedings under state law to abate the violation of an emission requirement contained in the state's approved implementation plan. Nothing in § 304 or elsewhere in the bill would prevent private plaintiffs from persisting in filing their federal action to accomplish essentially the same result. Moreover, there is no ready vehicle which would bring about a consolidation of the state action with the federal action. Again the courts and the administration of the Act would be confronted by unwarranted parallel actions.

If there is any justification for citizens' suits it is in those circumstances involving complete government inaction. The government is the proper source for the selection of enforcement tools, and its discretion in this regard should not be disrupted by private litigation. Where the government, federal or state, initiates enforcement procedures prior to, within or beyond a reasonable notice period, there is no rational justification for private suits.

V. MULTIPLE SUITS NOT INCLUDING THE GOVERNMENT

Proposed section 304 does not in any way provide for the consolidation and management of private actions which might be filed containing an overlap of law, facts and remedies. Since interstate standards and standards of interstate scope are to an extent contemplated under the legislation, it can be anticipated that parallel citizens' suits would be filed in several judicial districts.

Multiple suits may be transferred by the Judicial Panel on Multidistrict Litigation to a single transferee court pursuant to 28 U.S.C. § 1407, but only for purposes of pre-trial proceedings such as discovery. The statute provides for remand to the initiating district upon completion of such procedures.

Accordingly, the prospect arises that a number of district courts will be faced with determining the merits as to a number of overlapping claims and diverse results and remedies may be anticipated.

By the same token, no provision is made to prevent conflict between overlapping private national actions and private state actions which would be preserved under § 304(a)(2). It would seem appropriate that national citizen actions sufficient to invoke federal court jurisdiction should not be simultaneously tried in the state courts. The state courts are, however, appropriate repositories for those actions seeking remedies for alleged wrongs under state law whose impact is largely intrastate.

⁷ Such circumstances are not unusual at the present time. See, *Campbell Soup Co.*, FTC Dkt. No. C-1741, CCH Trade Reg. Rep., 1967-1970 trf. binder ¶12,261 (FTC, May 25, 1970).

Uncertainty is also created by the apparent limited right of intervention which would be accorded the Secretary pursuant to the last sentence of §304(a)(3). The proposal would limit the right of intervention to the presentation of evidence on the question of alleged violation. There is no sound basis for such an implicit restriction on the Secretary's power to intervene as a matter of right. His broad-scale participation would be conducive to the efficient management of litigation and the proper resolution of the proceeding. Such matters as consistency of enforcement program and feasibility and propriety of relief are peculiarly in the Secretary's province, and the court should not be precluded from considering his views in these respects.

Moreover, assignment of a limited right of intervention to the Secretary might be construed as indicating a Congressional intent to preclude intervention by cognizant state agencies. The same reasons which militate in favor of broad participation by the Secretary warrant similar participation by the states in appropriate cases.

By normal operation of Rule 24, Fed. R. Civ. P., both the Secretary and the states would very probably be empowered to intervene in § 304 actions as a matter of right. The Act should not inferentially limit this power through language such as appears at page 67, lines 14-16. If anything, the statutory right of intervention by such agencies for all purposes germane to the litigation should be confirmed.

VI. VOLUNTARY SETTLEMENT

Many private actions which would be filed under § 304 would lend themselves to expeditious voluntary settlement on a fair and reasonable basis without unnecessary imposition on the courts. Effecting such settlements, however, may not be in the interest of plaintiffs' attorneys who could thereby be faced with limited fees. Problems of judicial administration arising from the desire of some attorneys to expand the base of their fees have been recognized by the federal judges who edit the Manual for Complex and Multidistrict Litigation. See, *Manual*, § 1.61.

If private actions are to be authorized under the Act, there should be adequate provision to encourage both pre-litigation and post-litigation settlements. Pre-litigation settlement might be encouraged by provision authorizing potential defendants to submit settlement offers to the Secretary within a reasonable notice period. If the Secretary were to determine that the offer is fair and reasonable and is in furtherance of the purpose of the Act, there would be no basis for the private civil action.

Similar provision for judicial control and management of fair and reasonable settlement offers would enhance post-litigation voluntary settlement. Such provision might provide for an early judicial determination of the fairness and reasonableness of the offer and supervision of notice thereof to all parties. Once the offer is determined to be fair and reasonable, there is no basis for a continuation of the action.

VII. COSTS

Section 304(b) would authorize the courts, in the public interest, to assess costs, including attorneys fees and expert witness fees in favor of either party to litigation. Whatever might be the proper range of judicial discretion in other circumstances, there is no basis for plaintiffs who have rejected a fair and reasonable settlement offer to recover costs and fees, if indeed the litigation is allowed to continue.

The extent to which Rule 68, Fed. R. Civ. P., would be applicable to such circumstances is unclear. Specific provision should be made such that prolonged unnecessary litigation will be discouraged.

DEERE & COMPANY

DEERE & Co.,
LAW DEPARTMENT,
Moline, Ill., September 4, 1970.

Subject: Proposed amendments to § 207 of the Clean Air Act as proposed to be amended by "National Air Quality Standards Act 1970."

Mr. PHILIP CUMMINGS,
Senate Subcommittee on Air and Water Pollution,
Senate Office Building, Washington, D.C.

DEAR MR. CUMMINGS: Enclosed is a draft of language which Deere & Company suggests would be more appropriate to accomplish the purposes of the Committee on Public Works than the present concept of "warranty" as embodied in § 207(c) of the proposed amendment to the Clean Air Act.

As we understand it, the basic objective of the Committee is to require the manufacturer to design his air pollution control systems or devices so that, in essence, they will last for the lifetime of the vehicle. We believe that stating this objective in "warranty" terms is inappropriate because, in our opinion, it may cause confusion by introducing many concepts built up over the years in warranty law which may or may not be appropriate in this context.

For example, most express warranties given today by manufacturers of products are warranties to repair or replace parts which are defective in materials or workmanship. Your objective goes beyond this. Under the Uniform Commercial Code, certain measures of damages are prescribed for breaches of warranty which go beyond repair or replacement and I understand that it is not the Committee's intent to require manufacturers to be responsible for incidental or consequential damages which may be caused by the premature failure of pollution control systems or devices. Further, if the manufacturer is required to give a "warranty", this raises problems concerning the method by which the warranty is to be communicated to the purchaser as well as possible confusion caused by the lack of privity between the manufacturer and the ultimate purchaser, a concept which is still recognized by many courts.

The enclosed draft takes a different approach, that of merely stating the obligations you wish to see imposed.

It does not contain a requirement that the manufacturer warrant that the systems or devices are substantially of the same construction as systems or devices on test vehicles or test engines for which a certificate has been issued, since this is covered by the requirement of § 206(b)(4)(F) under which the manufacturer is required to certify to purchasers that engines conform to all applicable standards.

In the draft, I have also tried to state clearly the division of responsibility between the owner or operator and the manufacturer with regard to their obligations of maintenance, adjustment, service and operation.

The draft also gives the Secretary the power to establish the criteria for lifetime emissions in the case of commercial vehicles. While I understand that you intend to cover this same point in the Committee report, we believe it is desirable to have the authority clearly stated in the statute. If the Act is intended to cover off-the-road recreational vehicles, such as snowmobiles and all-terrain vehicles, then this distinction based on "commercial" may not be appropriate and perhaps the specific statutory definition of the period of lifetime emissions should be limited to non-commercial automobiles.

It should be noted that the enclosed draft is the suggestion of Deere & Company. While the Engine Manufacturers Association has been advised that we are submitting this draft, it has not been approved by the Engine Manufacturers Association and consequently does not necessarily represent the Association's views.

We would appreciate any consideration you and the Committee on Public Works could give to our suggestions.

Very truly yours,

L. RONALD MODLIN.

SUGGESTED AMENDMENT TO SECTION 207 OF COMMITTEE DRAFT OF "NATIONAL AIR QUALITY STANDARDS ACT OF 1970" BASED ON COMMITTEE PRINT NO. 1
DATED 25 AUGUST 1970

1. *Substitute the following for §207(c):*

"(c) Any system or device on a new vehicle or new vehicle engine for the control or reduction of emissions of air pollution agents shall be designed so that such vehicles or engines will conform to the applicable certificate issued under this title for the period of lifetime emissions of such vehicles or engines, if properly maintained, adjusted, serviced and operated in accordance with reasonable specifications or criteria established by the manufacturer of such vehicles or engines. Such specifications or criteria may include a requirement to clean, repair or replace elements of such system or device which may become contaminated or otherwise rendered ineffective by the air pollution agents being controlled or elements of such vehicles or engines which normally require cleaning, repair or replacement during the period of lifetime emissions for such vehicles or engines. The cost of such maintenance, adjustment, service and operation shall be borne by the owner or operator of such vehicle or engine. If any such system or device, when properly maintained, adjusted, serviced and operated, fails to meet the standards prescribed under Section 202 of this title, during the period of lifetime emissions for such vehicle or engines, the manufacturer of such vehicle or engine shall be responsible for the cost of labor and parts necessary to correct such deficient performance. The basis for the period of lifetime emissions under this section shall be, in the case of non-commercial vehicles, normal service in an urban area for ----- miles or ----- years, whichever is lesser, and, for commercial vehicles, shall be established by the Secretary, as part of his regulations issued under Section 202 of this title, on a basis equivalent to the period of lifetime emissions for non-commercial vehicles, taking into account different methods of measuring service life and different operating conditions under which commercial vehicles operate. Manufacturers may require reasonable evidence from the ultimate purchaser and subsequent purchaser of such vehicles or engines of the time when such vehicles or engines were first placed in regular service and may require reasonable evidence that the prescribed maintenance, adjustment, service and operating requirements have been observed before the manufacturer has any obligation to correct deficient performance. The manufacturer shall furnish with each vehicle or engine written instructions for the proper maintenance, adjustment, service and operation by the owner or operator. In addition, the manufacturer shall include on a label or tag permanently affixed to such vehicles or engines such information relating to control of vehicle emissions and compliance with this Act as the Secretary shall prescribe by regulation. The actual cost to the manufacturer of such system or devices and installation thereof shall be disclosed in accordance with the provisions of the Act of July 7, 1958 (15 U.S.C. 1231-1233)."

2. In Line 20 on Page 59, amend §207(e)(1) by substituting the words "the period of lifetime emissions of such vehicles or engines" for the words, "the term of any warranty required by this title."

3. In Line 7 on Page 60, amend §207(e)(2)(A) by substituting the words "any warranty required by this title" for the words "the title to such vehicle or engine".

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE,
Washington, D.C., August 27, 1970.

Hon. JENNINGS RANDOLPH,
*Chairman, Senate Committee on Public Works,
U.S. Senate, Washington, D.C.*

DEAR MR. CHAIRMAN: Pursuant to the request of the Chairman of the Subcommittee on Air and Water Pollution, contained in a recent letter to Secretary Richardson, I am pleased to transmit to you estimates developed by our National Air Pollution Control Administration of the Federal cost of implementing the Clean Air Act Amendments reported to your Committee by the Subcommittee on August 19. Since the Senate bill will contain authorizations through Fiscal Year 1973, estimates have been made only through that year.

As I am sure you understand, the enclosed cost estimates have been developed without reference to the Administration's budgetary planning, and they in no way reflect a commitment to request a particular level of funding should this or a similar bill ultimately be enacted.

The costliest item in the Subcommittee's bill, as reflected in the table of estimated resources needed, is the provision for State vehicle inspection grants. The estimate for that item reflects largely a one-time cost of providing the required equipment for emissions monitoring in State authorized programs. It is assumed that the cost of operation would be recovered out of a fee system. Since the NAPCA Forward Plan submitted to the Office of the Secretary already provided for increased funding for both the advanced power systems program for motor vehicles and for other R/D work under section 104 with respect to stationary source emissions, no major increases in these programs are contemplated specifically on the basis of the Senate bill.

Of course, if there are amendments to this bill prior to final Congressional action, we would need to review these estimates and make any necessary changes.

If we can be of further assistance to you during the Committee's deliberations, please contact either Dr. Glen Wegner, Deputy Assistant Secretary for Legislation (13-36311), or Mr. Roger Strelow, Director of the Office of Environmental Affairs (13-37264).

Sincerely,

JOHN G. VENEMAN,
Acting Secretary.

Enclosure.

ESTIMATE OF RESOURCES NEEDED TO IMPLEMENT PROPOSED AMENDMENTS TO THE CLEAN AIR ACT, AS CONTAINED IN BILL APPROVED BY THE SENATE SUB- COMMITTEE ON AIR AND WATER POLLUTION

This statement presents the National Air Pollution Control Administration's estimate of the funds and manpower needed to implement the Clean Air Act, including proposed amendments, in Fiscal 1971-73. The estimate shows the resources needed for prompt and effective implementation of the provisions of a bill reported by the Senate Subcommittee on Air and Water Pollution *in addition* to the resources already requested in the President's budget for Fiscal 1971 and the Fiscal 1972 and 1973 resource levels included in Plan "C" of the Environmental Health Service's Fiscal 1972-76 Forward Plan.

The estimates contained herein were derived from an analysis of the Senate bill and its impact on NAPCA's program operations. It should be noted that the Senate bill calls for a number of activities that go beyond those provided for in the Administration's proposed amendments to the Clean Air Act. The attached table presents a breakdown of the estimate by program areas; only program areas affected by the Senate bill are shown. In preparing this estimate, it was assumed that the amendments would be enacted by October 1, 1970. Following are brief explanations of the estimates for each program area.

1. **Air Quality Monitoring:** The Senate bill, like the Administration bill, calls for adoption and implementation of air quality standards applicable to the entire Nation. In addition, the Senate bill calls for attainment of the national air quality standards within three years. A rapid expansion of NAPCA's air monitoring activities will be necessary to provide more detailed data on existing air quality and maintain cognizance of progress toward attainment of the national standards. NAPCA should have 1,000 air monitoring stations in operation before the end of Fiscal 1972.

2. **Production-car Testing:** The Senate bill, like the Administration bill, calls for assembly-line testing of new motor vehicles. Tests that are correlated with emissions during actual operation of cars must be developed. Procedures to be followed by manufacturers in conducting such tests also must be worked out. It is anticipated that initial assembly-line testing will begin in Fiscal 1972.

3. **National Emission Standards:** The Senate bill would authorize setting of national standards applicable not only to emissions from major new stationary sources and hazardous emissions but also to emissions of many other pollutants from existing stationary sources. Thus, the Senate bill provides broader authority than the Administration bill would provide. Furthermore, the Senate bill sets up more elaborate procedures for standard-setting and enforcement, including, with respect to enforcement, a procedure for review of plans for new stationary sources and for certification of compliance, and, with respect to hazardous emissions, a rule-making procedure involving either emission prohibitions or standard-setting.

4. **Regulation of Fuels and Additives:** Provisions of the Senate bill are similar to those in the Administration bill. It is anticipated that lead additives used in gasoline will be the first item subject to regulation.

5. **Control Program Assistance:** The Senate bill goes well beyond the Administration bill in the matter of placing new responsibilities upon the States. States must develop implementation plans that provide for attainment of the national air quality standards within three years. Furthermore, the Senate bill would require such implementation plans to be far more detailed and comprehensive than any developed thus far. Among other things, States would be expected to consider land-use and transportation control measures as means of providing for attainment of the national air quality standards. In addition, State implementation plans will have to provide for motor vehicle inspection programs. States also will be called upon to assume responsibility for certification of compliance with Federal standards for new stationary sources and for enforcement of Federal emission standards applicable to existing stationary sources. Accordingly, State needs for Federal financial and technical assistance will increase substantially; moreover, the increased demand will occur more quickly than under the Administration bill. This increased need for assistance, combined with the Senate bill's provisions for a higher ratio of Federal-to-State funding of State-operated regional programs, means that resources available for assistance to States can and must be expanded more rapidly than had been previously anticipated. It should be noted that many of the personnel initially required for assistance to States can subsequently be shifted into Federal enforcement, as necessary, as activity under the Act moves from the development of plans and programs into actual enforcement of standards and regulations. Accordingly, this estimate does not include additional resources for Federal enforcement.

6. **Mobile Source Standards:** Under the Senate bill, standard-setting responsibilities would be expanded to include vessels and aircraft and commercial vehicles (whether new or not new). This will necessitate efforts to define emissions from sources not currently regulated (vessels and aircraft) and to develop other information needed in order to formulate appropriate emission standards.

7. **Used Vehicles:** The Senate bill would require used motor vehicles to be equipped with emission control devices when they are sold or resold by dealers. The bill calls for a Federal program to test and certify applicable devices. It is expected that enforcement will be conducted through State motor vehicle inspection programs.

8. **Instrumentation:** Several sections of the Senate bill contain requirements for measuring of emissions from stationary sources. Source owners and operators will be responsible for making such measurements in accordance with procedures prescribed by Federal or State agencies. Emission measurement is essential to assuring compliance with applicable emission standards. These provisions of the Senate bill underscore the need for rapid expansion of research and development in the area of instrumentation.

9. Fuel Conversion: The Senate bill would insert, in section 104 of the Clean Air Act, new authority to conduct research and development on methods of producing synthetic or new fuels. It is becoming increasingly apparent that clean fuels derived from fossil fuels (e.g., gas derived from coal) offer a needed and potentially practical means of dealing with problems such as sulfur oxides pollution. Accordingly, substantial support of research and development in this area is indicated.

10. Vehicle Research and Development: New responsibilities for standard-setting for vessels, aircraft, and non-highway vehicles will make it necessary to initiate or expand research and development on control techniques applicable to such vehicles.

11. Federal Facilities and Procurement: Under the Senate bill, all Federal facilities will be subject to any emission control requirements established by Federal and State agencies under the Clean Air Act. In addition, Federal contractors will be required to be in compliance with applicable Federal and State standards and regulations. The Department of Health, Education, and Welfare will have substantial responsibilities related to the monitoring of Federal contractors' compliance.

ESTIMATE OF RESOURCES NEEDED TO IMPLEMENT PROPOSED AMENDMENTS ¹ TO
CLEAN AIR ACT AS CONTAINED IN SENATE BILL

[Dollars in thousands]

	Fiscal year 1971		Fiscal year 1972		Fiscal year 1973	
	Position	Amount	Position	Amount	Position	Amount
Air quality monitoring.....	85	\$3,700	205	\$3,750	205	\$3,750
Production car testing.....	30	1,070	80	3,330	100	3,900
National emission standards.....	107	2,210	130	3,300	130	3,300
Fuels/fuel additives regulation.....	20	980	30	1,100	30	1,100
Control program assistance:						
(1) Technical assistance.....	254	6,100	402	11,170	410	11,415
(2) Control program grants.....	26	12,900	12	6,300	16	8,000
(3) State vehicle inspection grants.....	2	2,500	29	32,500	50	75,000
Mobile source standards.....	7	655	11	660	12	240
Used vehicles.....	16	1,275	16	1,800	19	1,800
Instrumentation.....	4	1,200	20	5,800	20	5,800
Fuels conversion.....	1	500	2	1,000	10	10,000
Vehicle R/D.....	3	750	3	750	3	1,000
Federal facilities and procurement.....	15	500	35	1,200	50	1,700
Subtotal ¹	570	34,340	975	72,660	1,055	127,005
Forward planning estimate; imple- ment current legislation.....	1,141	112,018	1,450	160,500	1,755	186,100
Subtotal cost to implement new legislation.....	1,711	146,358	2,425	233,160	2,810	313,105
Effects research, sec. 107.....	30	3,000	110	5,000	120	7,000
Grand total.....	1,741	149,350	2,535	238,160	2,930	320,105

¹ Excludes Sec. 107 effects research.

THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE,
Washington, D.C., September 2, 1970.

HON. EDMUND S. MUSKIE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR MUSKIE: Enclosed for your information are copies of a letter to Secretary Richardson from the President of the Automobile Manufacturers Association and our response. The letters concern the amendments to the Clean Air Act currently being considered by the Public Works Committee.

I hope our response will be helpful to the Committee in its deliberations. We would be pleased to provide any additional information you might desire in connection with the bill you are considering.

Sincerely,

JOHN G. VENEMAN,
Acting Secretary.

Enclosure.

THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE,
Washington, D.C., September 2, 1970.

MR. THOMAS C. MANN,
President, Automobile Manufacturers Association, Inc.,
Washington, D.C.

DEAR MR. MANN: This is in response to your letter of August 27, 1970, concerning needed reductions in motor vehicle pollution. I have reviewed the matter discussed in your letter and am pleased to furnish you the following comments.

The intention of this Department to require a reduction in motor vehicle emissions beyond those proposed for application to 1975 models in the *Federal Register* issuance of July 15, 1970, is a matter of public record. At the Environmental Quality Council meeting on November 20, 1969, which was attended by representatives of the four major domestic manufacturers, Secretary Finch presented this Department's interim and ultimate goals for vehicle emissions. The interim goals were proposed for the 1975 model year; the ultimate goals were proposed for 1980.

The paper entitled "Federal Motor Vehicle Emission Goals for CO, HC, and NO_x Based on Desired Air Quality Levels," prepared and presented by personnel of the National Air Pollution Control Administration, is intended to show, within the limits of existing data, the relationship between motor vehicle emission reductions and improvements in air quality. More specifically, it seeks to demonstrate that further reductions in such emissions, beyond those we have proposed for 1975, will be necessary, and that the order of magnitude of the needed reductions is consistent with the goals we previously announced for 1980.

The methods employed in analyzing the data are widely used in calculating emission reductions needed to insure attainment of given air quality levels. It appears to me that the paper makes responsible and constructive use of such data and methods as a means of determining what the Nation must do in order to reduce the threat of air pollution in years to come, particularly in view of the alternative, which is to postpone making projections and decisions for several years in order to produce more definitive data from which more precise conclusions could be drawn.

I assume that your reference to required publication of information in the *Federal Register* concerns the statements made in the National Air Pollution Control Administration's paper with respect to ambient air quality levels needed for health protection. In this connection, it should be noted that air quality criteria documents for carbon monoxide, hydrocarbon, and photochemical oxidants have been issued in accordance with procedures prescribed in the Clean Air Act; their issuance in March 1970 was announced in the *Federal Register*. The air quality criteria document for nitrogen oxides is in an advanced state of preparation and is expected to be ready for issuance later this year or early next year. The résumé section of the published criteria documents reflects a judgment that ambient air quality standards should be set below the lowest effect levels cited therein.

I do not share your criticism of the National Air Pollution Control Administration's use of information from air quality criteria documents already published or in the advanced stage of preparation as a means of projecting needed reductions in motor vehicle pollution, particularly since the document in question carefully states the nature and limitations of its data and assumptions.

I trust that you will find these comments helpful.

Sincerely,

JOHN G. VENEMAN,
Acting Secretary.

(The letter from Thomas C. Mann, AMA, to Secretary Richardson, to which the preceding letter responds, appears at p. 1576.)

THE SECRETARY OF HEALTH, EDUCATION, AND WELFARE,
Washington, D.C., August 19, 1970.

HON. EDMUND S. MUSKIE,
Chairman, Subcommittee on Air and Water Pollution, Committee on Public Works,
U.S. Senate, Washington, D.C.

DEAR SENATOR MUSKIE: The President has asked me to respond to your July 30 telegram urging that he direct the Attorney General and me to prepare to implement subsection 108(k) of the Clean Air Act in view of the unpleasant

and persistent air pollution problem that occurred along the eastern coast of the United States during the period of July 27-July 31.

This subsection of the Act provides that if the Secretary has evidence that one or more sources of air pollution presents an "imminent and substantial endangerment to the health of persons," and if he finds that State or local authorities have not acted to abate such sources, he may request the Attorney General to bring suit in a Federal court to enjoin any contributor to such pollution or to take "such other action as may be necessary."

Considerable planning and preparation for dealing with air pollution episodes by the National Air Pollution Control Administration (NAPCA) put us in a position of readiness to act quickly and decisively under subsection 108(k) had that been appropriate. However, a combination of the pollutant levels experienced and the generally responsible actions of State and local officials made action under that subsection unnecessary, indeed unwarranted.

We have defined "imminent and substantial endangerment to the health of persons" under subsection 108(k) as that level of any pollutant that is associated with (1) the production of significant ill effects (incapacitating reversible body damage or irreversible body damage) in any significant portion of the general population (i.e., other than isolated, minor groups of particularly susceptible persons for whom other precautionary measures can be taken) or (2) any perceptible increase in the mortality rate. Specific concentrations corresponding with this definition have been determined for various pollutants, based upon the air quality criteria documents, which are descriptive of known health effects, issued by this Department under the Act. These are levels which should never be reached and if imminent require immediate pollution abatement action. The relevant concentrations are as follows:

Sulfur and Particulates

0.4 ppm sulfur dioxide (24-hour average) and 5 coh units (750 ug/m³) or any combination that gives the same multiplicative product.

Carbon Monoxide

125 ppm for 1 hour
75 ppm for 4 hours
50 ppm for 8 hours

Photochemical Oxidant

0.4 ppm (4 hour average)
.6 ppm (2 hour average)
.7 ppm (1 hour average)

The attached table of data from NAPCA's Emergency Operations Control Center (EOCC) shows that during the period in question air quality in the major cities involved did not deteriorate to anywhere near the extent at which the levels operationally defined as constituting the substantial endangerment to health referred to in subsection 108(k) would be considered imminent.

Nonetheless, I would like to call your attention briefly to NAPCA's preparations for and active involvement in dealing with the situation that existed during July 27-July 31. NAPCA's basic approach to air pollution episodes is to seek to prevent "imminent and substantial endangerment" from occurring. State and local officials are encouraged and, where possible, required to follow this approach, consistent with the role of primacy in air pollution control outlined for them by the Clean Air Act.

Accordingly, NAPCA requires that States include procedures for controlling air pollution episodes, including emergencies, in the implementation plans they develop for achievement of air quality standards in Federally-designated air quality control regions and requires that such procedures be included in programs of State and local agencies as a condition to eligibility for Federal matching grants.

NAPCA has developed a model plan for dealing with air pollution episodes and has conducted seminars on the plan for State and local agencies. Essentially, the plan contains a four-stage warning system and an emission-reduction scheme that becomes more restrictive as each stage is reached. These stages, each corresponding to specific pollutant concentrations, are (1) high air pollution potential advisory (HAPPA), (2) alert, (3) warning, and (4) emergency. The first is based on an identification of meteorological conditions conducive to unusually high

pollution levels; the second and third are based on actual measurements of pollution levels; and the fourth is based on a reasonable prediction that levels causing imminent and substantial endangerment to health could occur for even a short period of time. It is at the fourth stage that action under subsection 108(k) will be taken if State and local officials do not take adequate equivalent action.

During the July 27-July 31 eastern coast episode, NAPCA officials worked continuously with State and local officials, providing technical assistance, encouraging appropriate actions, and accumulating a centralized collection of current data. As indicated earlier, however, all activities related to the advisory or alert stages of NAPCA's episode plan. I am attaching a brief inventory of key events during the period in question.

All of us must redouble our efforts to ensure that even such non-emergency situations are prevented in the future since there is no question of their adverse effect on public health and welfare. I join the President in hoping that this episode will help to stimulate action. I am confident that the NAPCA plan provides a sound basis for action and assure you that the subsection 108(k) authority for Federal action to deal with emergencies will be vigorously exercised if and when it is necessary.

Sincerely,

ELLIOT RICHARDSON, *Secretary*.

Two enclosures.

AIR POLLUTION EPISODE DATA

City	Sulfur dioxide			Soiling			Oxide			
	SO ₂ average	Average period	SO ₂ Hi	High hour	Soiling average	Average period	High soiling	High hour	High	High Hour
Atlanta:										
July 28-29	0.03	8-8	0.09	July 28, 0100	1.1	8-8	2.3	23-24		
July 29-30	.05	8-8	.21	July 30, 7-8	.09	8-8	.81	July 30, 5-6		
July 30-31	.03	8-8	.11	0900	.58	8-8	1.09	1000		
Boston:										
July 28	.03	0-24	.10	22-23	1.2	0-24	1.2		0.07	12-13
July 29		0-24	.05	12-15						12-13
Philadelphia:										
July 27	.07	9-24	.22	10-11					.125	12-14
July 28	.14	0-24	.24	11-12					.11	14-15
July 29	.06	0-24	.17	0-1					.11	10-11
July 30	.03	0-24	.08	6-7					.03	16-19
July 31	.01	0-7	.02	4-5						
Washington:										
July 27	.02	14-24	.04	21-22					.111	14-15
July 28	.03	0-24	.09	9-10					.1	12-13
July 29	.02	0-24	.07	7-8, 20-21					.08	12-14
July 30	.03	0-24	.15	11-12					.073	14-15
July 31	.01	0-7	.02	1-3						
New York:										
Central Park area:										
July 28	.09	13-24	.17	22-24	.80	13-24	1.2	17-18		
July 29	.14	0-24	.24	2-3	1.2	0-24	1.9	11-12		
July 30	.10	0-24	.17	4-5	1.1	0-24	2.0	8-9		
July 31	.06	0-7	.07	6-7	.7	0-7	0.8	6-7		
121st Street:										
July 27	.10	15-24	.15	23-24	1.7	15-24	2.4	18-20		
July 28	.17	0-12	.21	10-11	2.3	0-12	3.2	8-10		
July 29	.09	16-24	.13	16-17	2.7	16-24	3.5	22-23		
July 30	.12	0-24	.17	4-5	2.3	0-14	3.7	4-6		
July 31	.13	0-7	.13	1-7	1.4	0-8	2.0	6-8		
Astor Place:										
July 28									.09	10-11
July 29									.07	12-11
July 30									.04	12-13
July 31										
Birmingham (COT):										
July 28, July 29	.004	12-12	.007	18	2.9	12-12	4.8	6-8	.049	12
July 29, July 30	.004	12-12	.007	15	2.4	12-12	4.7	10-12	.005	12

Monday, July 27

Local HAPPA was issued for Washington, D.C. and Baltimore, Md. At 4:20 pm the EOCC received a report of smog conditions in New York City. The situation was verified with the New York Regional Office which reported SO₂ averaging .09 ppm with a high one-hour of .21 ppm reported in Manhattan that afternoon.

Tuesday, July 28

The Weather Bureau reported smog and haze over the East Coast and forecast that it would continue for 36 hours. The EOCC requested additional air quality information from Philadelphia, New York and Washington. The local HAPPA's for Washington and Baltimore were continued and a local advisory was initiated for Philadelphia. A national HAPPA was issued for the area from Philadelphia to Atlanta. A report was received from Maryland Health Department that oxidants in Baltimore had exceeded .1 ppm in the Baltimore area and that a No. 1 Advisory was being called. The State of New Jersey went into a Watch status after the HAPPA forecast was issued for Philadelphia.

Wednesday, July 29

New York City initiated abatement actions and asked for cooperation on the part of the public. The following actions were initiated:

1. Municipal incineration was cut by 20%.
2. Incineration was stopped by the Housing Authority and hospitals.
3. Private owners were asked to stop incineration.
4. Citizens asked not to drive unless necessary.
5. City considered the possibility of prohibiting driving below 59th Street in Manhattan.

6. Consolidated Edison was asked to use low sulfur fuel to the greatest extent possible.

At 1 pm the Weather Bureau reported that the local HAPPA would be continued for Washington, Baltimore, and Philadelphia and that the national HAPPA would be extended as far South as the Georgia-Florida line and as far West as Nashville, Tennessee.

It was reported that Baltimore requested voluntary restrictions on automobile use. The Washington, D.C. area reached the oxidant alert stage and voluntary restrictions on automobiles were asked for and sensitive persons were alerted to take necessary precautions.

New Jersey was reported to be in contact with the City of New York and advised them that New Jersey would take any action that was necessary or requested to alleviate the situation in the New York Metropolitan Area. New York City advised New Jersey that action by the State of New Jersey was not necessary at that time as far as it related to the New York portion of the Metropolitan Area.

By 4:00 that afternoon, rain was reported in both the Philadelphia and New York Metropolitan Area, providing some relief.

Thursday, July 30

The HAPPA was cancelled for the entire area north of a line from Raleigh, North Carolina to Tuscaloosa, Alabama. Wind speeds increased in the Philadelphia-New York alert area. Visibility was reported improved. New York City showed improved air quality but the city remained on Alert status and continued the actions that were initiated on July 29.

Friday, July 31

The Weather Bureau reported New York City had 7-8 mile visibility and that the wind speeds had increased throughout the area from Washington to New York City with winds expected in excess of 10 knots throughout the area by the afternoon.

Conditions in New York City continue to improve and the City rescinded its ban on incineration.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,
OFFICE OF THE SECRETARY,
Washington, D.C., August 4, 1970.

Hon. EDMUND S. MUSKIE,
Chairman, Subcommittee on Air and Water Pollution, Committee on Public Works,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: As you know, the Administration's proposed amendments to the Clean Air Act would authorize the Department of Health, Education, and Welfare to establish standards with respect to motor vehicle fuels and fuel additives. (S. 3466, Section 5.) The rationale for this proposal was described by the President in his Message to the Congress on Environment, in which he said: "What goes into a car's fuel has a major effect on what comes out of its exhaust, and also on what kinds of pollution-control devices can effectively be employed. Federal standards for what comes out of a car's engine should be accompanied by standards for what goes into it."

Under the existing provisions of the Clean Air Act, there is no authority for regulation of fuels and fuel additives. Emission standards applicable to new motor vehicles are authorized and have been established, but these place the burden of insuring that new vehicles will comply with the standards entirely on the manufacturers of motor vehicles. The fact is, however, that significant advances in the prevention and control of motor vehicle pollution can be made through, and, in some instances, may be dependent on, fuel modifications. In short, the present situation is inconsistent with the national interest in pursuing all promising approaches to solving the problem of motor vehicle pollution.

H.R. 17255, passed by the House of Representatives on June 10, 1970, authorizes the regulation of fuels (except aviation fuels) and fuel additives, but it imposes a number of unnecessary and unreasonable requirements with regard to establishment of standards for motor vehicle fuels. I am writing to you to express the Administration's strong preference for the motor vehicle fuel and fuel additive regulation provisions in the Administration bill (S. 3466), with the hope that the Senate and ultimately the Congress will adopt these, rather than the provisions in H.R. 17255.

Among the major difficulties posed by the House bill, standards applicable to motor vehicle fuels or fuel additives *established on the basis that emissions of such fuels or fuel additives will endanger the public health or welfare* must be premised on a finding that in the absence of such a standard it will not be technologically or economically feasible to achieve automotive emission standards established under Section 202 of the Clean Air Act. This requirement might preclude any action since there will be few, if any, cases in which fuel modification will be the *only* technologically or economically feasible means of achieving compliance with motor vehicle emission standards. Such an all-or-nothing approach would preclude fuel modifications which are the *most* feasible, but not the *only* feasible means of dealing with specific emission problems.

This provision also appears to restrict the establishment of motor vehicle fuel or fuel additive standards to instances in which a motor vehicle emission standard has been established under Section 202 and a determination is made that the fuel or fuel additive regulation is the only means of achieving the emission standard. Since emission standards under Section 202 are applicable only to new motor vehicles, this provision appears to rule out consideration of the much broader benefits obtainable through fuel modification. To the extent that fuel modification results in reduced emissions, it has this effect on all motor vehicles using the fuel involved, not just new motor vehicles. Under H.R. 17255, however, it appears that this advantage of fuel modification could not be taken into consideration in establishing fuel or fuel additive standards.

The House bill also provides that standards *established on the basis that a motor vehicle fuel or fuel additive will impair the performance of an emission control device or system* must be based on specific scientific findings, including a cost-benefit analysis comparing emission control devices or systems that are or will be in general use and require the proposed standard with those devices or systems that do not require the proposed standard. This provision would require extensive, time-consuming testing of emission control devices and systems to evaluate their performance in the presence (in varying amounts) and absence of specific components

of fuels, including additives. Such testing would be particularly difficult and time-consuming with respect to devices or systems that are expected to come into general use at some future time but are not in general use at the time a standard for fuels or fuel additives is being proposed. Furthermore, it appears that the burden of conducting such tests would fall largely, if not entirely, on the Department, since H.R. 17255 would not empower the Department to require manufacturers of fuels, additives, or motor vehicles to furnish any data they had not already developed.

We recognize that standards for fuels and fuel additives should be based on persuasive supporting data, and that the cost-benefit analysis principle as well as general concern for economic costs is important in this type of regulation, but the provisions of H.R. 17255 go well beyond that point; they would force the Department to bear an unreasonable burden of proof in setting standards for fuels and additives. It should be noted that this would be a far different burden than the burden now imposed on the Department in setting emission standards for motor vehicles under Section 202 of the Clean Air Act.

Still another defect in H.R. 17255 is that it fails to incorporate those provisions of the Administration bill that were intended to give the Department greater access to needed data on emissions associated with the use of fuel additives and on the adverse effects of such emissions on public health and welfare. These provisions appear in Section 5(c) of S. 3466. While H.R. 17255 includes a provision under which the Department could obtain certain information relating to fuels and additives, this provision adds little, if anything, to the inadequate authority already available under existing Section 210 of the Clean Air Act.

As you know, particular attention has been devoted recently to the question of reduction and eventual elimination of the lead additive now commonly used in motor vehicle fuels. The approach to regulating fuel additives embodied in H.R. 17255 appears inconsistent with an orderly strategy for dealing with this issue.

On July 8, 1970, the Department of Commerce issued the interim report of its Technical Advisory Board Panel on Automotive Fuels and Air Pollution, entitled "The Implications of Lead Removal from Automotive Fuel". The basic conclusion of this Panel of non-governmental experts, whose activities are supported by the Department of Health, Education, and Welfare, and the Department of Transportation, as well as the Department of Commerce (with liaison to the Office of Science and Technology, the Council on Environmental quality and the Department of the Interior), is that:

"It is important to the national auto emission control program to have unleaded gasoline generally available so that automobile designers and producers have the option of using catalytic or other advanced emission control devices to enable them to meet increasingly stringent emission standards, especially those proposed by HEW for 1975. At present there are no "proven" devices available to meet the proposed 1975 standards . . . However, in the technical judgment of the panel, there is a high probability that effective and durable devices can be developed for automotive use within the next four years. The panel believes that the development of a variety of devices depends on the assurance that an unleaded fuel will be generally available when needed. The panel believes that this can best be achieved through Federal action." (Emphasis added.)

The Panel specifically recommends that the Federal Government declare its intention to require the general availability of an unleaded grade of gasoline by mid-1974 and a low-leaded fuel no later than the end of 1972. The provisions in H.R. 17255 appear to make difficult if not impossible the pursuit of a strategy such as that endorsed by the Panel, a strategy of ensuring the general availability of low-lead and ultimately unleaded gasoline in order to maximize the options for development of advanced emission control systems.

The provisions of the Administration bill with respect to regulation of motor vehicle fuels and fuel additives do not have the deficiencies noted above in connection with H.R. 17255. We believe the Administration bill provides a more appropriate and effective framework for helping to control emissions through the regulation of fuels and fuel additives, and specifically lead additives in addition to setting emission standards for new vehicles. Accordingly, the Administration urges adoption of the fuel and fuel additive regulation provisions of S. 3466.

These fuel and fuel additive provisions are an integral part of the Administration's "Clean Air Act Amendments of 1970," enactment of which would be in accord with the Administration's program.

Sincerely yours,

CREED C. BLACK,
Assistant Secretary for Legislation.

ENVIRONMENTAL ACTION

[Press release, August 25, 1970]

Environmental Action today expressed its concern for the fate of the air pollution bill before the Senate Public Works Committee. "Industry lobbyists are virtually 'camping in' at the Committee offices and at those of sympathetic Senators", said Denis Hayes, National Coordinator of Earth Day, April 22, 1970. "Among those making regular visits, for instance, are the National Lead Association, American Petroleum Institute, Manufacturing Chemists Association, Automobile Manufacturers Association, Coal Policy Conference, and top policy management from General Motors, Ford Motor Co., American Motors Corp., and Chrysler Corp." Environmental Action recognizes that these are formidable opponents.

The bill, submitted to the full Committee by Senator Muskie's Subcommittee on Air and Water Pollution is a "mixed bag" noted Hayes. The provisions represent some important gains in the control of automobile pollution, setting standards designed to phase out the internal combustion engine by 1975. On the other hand, the provisions for controlling stationary and industrial pollution were termed "cumbersome." Hayes said, "We will be watching Senator Muskie's performance closely. The automotive provisions of his committee are worth fighting for. His stationary source provisions are of dubious utility already. Any further concessions on this score would doom the nation to years of excess deaths and air pollution emergencies." "We've only got the breathing public on our side", said a spokesman. "This will be a tough fight. It could be Senator Muskie's finest hour. We hope that he and his nine colleagues on the Subcommittee (all of whom voted for the bill) stand up to the challenge."

(1603)

FORD MOTOR COMPANY

FORD MOTOR COMPANY'S POSITIONS ON THE MAJOR ISSUES OF SENATOR MUSKIE'S SUBCOMMITTEE'S PROPOSED AMENDED CLEAN AIR ACT

A. STATIONARY SOURCES

1. Up until the present time, states have been setting regional air quality standards. As we understand it, the proposed bill would require the Secretary of HEW to publish national ambient air quality standards necessary to protect the health of persons.

Ford Motor Company supports this position, but is opposed to the provision that gives the states the authority to adopt ambient air quality standards that are more stringent than the national ambient air quality standards. We feel that it is imperative for an industry that operates in all 50 states to know exactly what the task should be in respect to clean air without being subjected to 50, 80, or 180 different standards (depending on the number of regions involved).

2. There is a section in this proposed bill that recognized that new factories (or old factories which are modified) be certified as to compliance with emission standards at their stacks. Such certification would indicate that these new plants were complying at a level consistent with the national ambient air quality standards. We endorse this approach to the problem and think it should be extended to all existing factories or stationary sources of pollution as well as new factories or modified older factories. Ford Motor Company believes that the same logic should apply to existing facilities in order to clean up the sources of air pollution so they meet specific standards. The aim of all should be clean the air and to apply the standards to all contributors. No industry wants to be penalized for other polluters within any given region who are not meeting requirements for a desired air level.

B. AUTOMOTIVE SOURCES

1. *Section 202(e)* of the proposed bill eliminates any consideration of technological feasibility. The levels prescribed by 202(e) for 1975 models are lower than any we know how to meet. They would require reductions of 90% from 1970 levels. If such levels are established, the technology as we know it today would not permit us to continue to produce cars after January 1, 1975.

We have learned much in the past few years with respect to the control of emissions from vehicles. We expect to learn more in the next two or three years. However, unless the state of the art in the emissions field progresses at a much greater rate than it has during the past decade, we have grave doubts about our ability to meet the standards prescribed by the bill.

The 1970 standards resulted in a 78% reduction of exhaust hydrocarbons and a 70% reduction of carbon monoxide from the levels of uncontrolled (pre-1968) vehicles as measured by the existing Federal Test Procedure. Recently, HEW proposed extremely stringent controls for HC, CO, and NO_x (oxides of nitrogen) for 1975 models. These proposed standards, using existing Federal Test Procedures, would result in exhaust emission reductions of 95% and 86% HC and CO, respectively, from pre-control levels. Ford Motor Company intends to meet these very low levels, although, at present, we are uncertain as to how we are going to do it.

The standards proposed by *Section 202(e)* of this bill would result in exhaust emission reductions of 98% and 97% of HC and CO, respectively. We believe these levels are unrealistic. The enhancement of air quality produced by these standards would be minimal but the engineering task created by the bill would be increased beyond what appears to be the breaking point.

PERCENT REDUCTION FROM THE PRE-1968 VEHICLES

	HEW, 1970	HEW, 1975	Sec 202(e), 1975
HC-----	78	95	98
CO-----	70	86	97

The control level of sources, including mobile, should be based on a "need" that is related to the national ambient air quality standards that the Secretary is required by Section 110 (a) to publish. We respectfully submit that it would be manifestly inappropriate to freeze into the statute a 90% reduction for 1975 vehicles until those standards are established.

Furthermore, we believe it is completely unrealistic to freeze standards into the statute. By doing so, it deprives the Secretary of the opportunity to set standards based on the national air ambient quality standards which this bill directs him to promulgate. With new data being accumulated daily this can be accomplished by a responsive technical administrative agency and not frozen arbitrarily into law with no scientific justification for the levels of control specified. We submit that these laws must provide for some flexibility.

We urge that Section 202 (e) be revised so as to require the Secretary to re-evaluate the 1975 standards proposed by him in the light of the national ambient air quality standards to be established under this Act and that they be as stringent as is necessary to protect the health of persons. Such standards should be established no later than January 1, 1972 and become effective with respect to 1975 model automobiles, or after January 1, 1975.

2. Section 207(c) would require a 100,000 mile (or ten year) performance warranty as to emission levels. We strongly oppose. A performance warranty rather than a failure of a specific piece of hardware on a vehicle is completely unenforceable and impractical. Since this warranty would apply in part at least to emission levels, it becomes a performance warranty which requires some type of measurement.

There is no way to measure emissions in the field and have the results correlate with the original 13-hour certification test. This has a further complication. It is impossible for a dealer in making a warranty repair to know if he has brought the vehicle into compliance. That type of equipment and engineering ability will not be in dealers' service departments in the foreseeable future. In addition, we do not know how to determine if the vehicle has been "properly maintained, serviced, and operated."

We support the purpose of this subsection, and, to this end, do not object to the inclusion of 207(c)(1). However, because of the impracticability of the performance aspects, we recommend deletion of all that follows the word "title" on line 9 through the word "section" on line 14. For these same reasons, we oppose the recall provisions of section 207(d)(2) but do not oppose such a recall provision if limited to the requirements imposed by section 207(c)(1).

This section of the bill would also require the suggested retail price sticker (which manufacturers, by law, must place on automobiles) to contain a statement of the actual costs to the manufacturer of emission systems, including installation and warranty. We are opposed to the provision and recommend that the last sentence on page 57 be eliminated since it is impossible for a manufacturer to comply. It is impossible to determine the actual cost of a complex system which is made up of both non-distinguishable and distinguishable portions of the entire assembly of an automobile, much less the actual cost of warranty which is not fully experienced until years after the completion of the particular model run.

Finally, disclosure of such cost information would be inconsistent with the intent of the Sherman Antitrust Act.

3. We are uncertain as to what the Subcommittee intended with regard to Section 210(a). However, reading it as giving each state authority to control new vehicle emissions to standards more stringent than the national requirements if needed to meet national air quality standards in a specific region, this action could pose drastic problems for the auto industry.

Historically, the automobile industry has been able to provide economical transportation for the American public because of the economies of scale of mass production. Given the potential for each state and each political subdivision to establish different standards, testing and enforcement procedures, the impact on the automobile industry would be chaotic.

C. CITIZENS' SUITS

We would oppose Section 304 which permits individual citizens to sue polluters on the basis that: (a) the other enforcement and regulatory provisions outlined in the bill are fully adequate; and (b) citizens' suits would present inordinate administrative difficulty. In this proposed law there are numerous and adequate ways for the government to administratively enforce emission controls. This is the only logical way to insure compliance rather than through a multitude of individual suits that clutter up the courts, bedevil the Administrator and the regulated, and in general slow down the fight for clean air.

I. *Amend Section 113(b)(2) (pages 23 and 24 of Committee Print No. 1 dated August 25, 1970) as follows:*

"(2) Within one hundred and twenty days after the publication of such a list or revision thereof, the Secretary shall publish in the Federal Register proposed regulations, in accordance with section 553 of title 5 of the United States Code, establishing Federal standards of performance for new sources. Such standards shall be based on the greatest degree of emission control which the Secretary, *giving appropriate consideration to technological and economic feasibility*, determines to be achievable. ~~through application of the latest available control technology, processes, operating methods, or other alternatives.~~ The Secretary shall afford interested persons an opportunity for written comment on such proposed regulations. After considering such comments, he shall promulgate, within ninety days after such publication, such standards with such modifications as he deems appropriate and shall notify the States of such promulgation. The Secretary may from time to time revise such standards following the procedure required by this subsection for such standards."

II. *Amend Section 212 (pages 67 and 68 of Committee Print) as follows:*

"(a) The Secretary may from time to time by regulation designate any fuel or fuels (including fuels used for purposes other than vehicles), and, after such date or dates as may be prescribed by him, no manufacturer or processor of any such fuel may deliver any such fuel for introduction into commerce or to another person who, it can reasonably be expected, will deliver such fuel for such introduction, unless (A) such fuel or fuel additive contained therein has been registered in accordance with the requirements of subsection (c)(b)(1) of this section. ~~and (B) any such fuel is in conformity with regulations established by the Secretary in accordance with subsection (b) of this section.~~

"(b)(1) The Secretary may, on the basis of information obtained under subsection (c) of this section or any other information available to him, by regulation prohibit the use of any fuel which includes any components, including additives, in amounts which may contribute to emissions which would endanger the public health or welfare or impair the emission control performance of any vehicle or vehicle engine which the Secretary finds would otherwise conform to standards promulgated pursuant to section 202 of this Act.

"(2) Prior to establishing any prohibition on the use of any fuel which includes components, including additives, in any amount in any fuel for purposes other than protection of the public health, or welfare, the Secretary shall find and publish such finding, that such standards are necessary for the application of the most effective program of emission control for new vehicles or new vehicle engines or certified used vehicle devices or that such standards are necessary to achieve the most economic alternative emission control performance over the life of the vehicle, engine or device.

"(3) For the purpose of carrying out this section the Secretary may prescribe regulations prohibiting the manufacture for sale, the sale, the offering for sale, or the delivery of any fuel in commerce.

"(c)(b)(1) The Secretary may require the manufacturer of any fuel or fuel additive to furnish such information as is reasonable and necessary to determine the emissions resulting"

III. *Amend Section (d) (lines 10 and 11 on page 71 of Committee Print) as follows:*

"(d) Any person who violates subsection (a) ~~or subsection (b)~~ of this title shall forfeit and pay to the United"

IV. Amend Section (c)(4) (lines 10 through 18 on page 30 of Committee Print) as follows:

"(4) The Secretary may, upon application filed by any owner or operator, waive, subject to such terms and conditions as he may prescribe, the application of this section to any stationary source of such owner or operator if he finds, and publishes his finding, that such source has achieved the greatest degree of air pollution control ~~currently technically~~ *that is technologically and economically* feasible and that the health of persons is not adversely affected by such waiver. Such waiver shall be subject to the review provision of section 116 of this Act.

Statement by
L. A. Iacocca

Executive Vice President
Ford Motor Company

Concerning Pending Senate Changes to the Clean Air Act

Dearborn, Michigan

September 9, 1970

The Senate Subcommittee on Air and Water Pollution chaired by Senator Muskie of Maine has just adopted an amended Clean Air Act. Some of the changes in this bill could prevent continued production of automobiles after January 1, 1975. Even if they do not stop production, they could lead to huge increases in the price of cars. They could have a tremendous impact on all of American industry and could do irreparable damage to the American economy. And yet, in return for all of this, they would lead to only small improvements in the quality of the air.

Last December, Mr. Henry Ford II publicly committed Ford Motor Company "to an intensified effort to minimize pollution from its products and plants in the shortest possible time." He promised that "we will achieve products and manufacturing facilities that do not significantly contaminate our atmosphere, waters or landscape."

We stand behind those promises. We support the intent of the Subcommittee's bill. We are opposed to some of its provisions because they are unenforceable or impractical. We oppose these provisions because they would produce minimum improvements in air quality at maximum cost to the public.

The facts about this bill have not become known to the American people because no public hearings have been held on its major changes. On August 25, when the new language was made public for the first time, it was announced that the full Public Works Committee would go into closed session two days later with the intention of reporting the bill to the Senate before the Labor Day recess which started on September 2. Because no hearings were scheduled on the bill and because of the severe impact of its provisions, we took the only course open to us — we went to Washington to present our views to members of the Committee and its staff. The Public Works Committee did not meet its September 1 target, but it is expected to report the bill to the Senate within the next few days.

We are concerned about the specific provisions of this bill. But we are more concerned that legislation of great consequence to everyone in this country is being rushed through Senate committees with no opportunity for public discussion.

The manufacture of motor vehicles and parts is the largest industry in America — first in sales, first in employment and first in payrolls. Automobile manufacturing and distribution and automotive transportation provide 15 million jobs — 28 percent of private non-farm employment.

ECONOMIC IMPORTANCE OF THE AUTOMOBILE INDUSTRY

\$27 BILLION SALES (Four Auto Companies)

800,000 U.S. JOBS (Vehicle & Parts Mfg.)

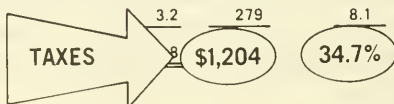
**\$6.5 BILLION ANNUAL PAYROLL
(Vehicle & Parts Mfg.)**

15 MILLION DEPENDENT U.S. JOBS

Each car and truck manufactured and sold in the United States generates \$1,200 in taxes — nearly 35 percent of the average retail price. And these taxes provide 5 percent of the total tax revenue of all units of government.

UNITED STATES
TAXES GENERATED BY THE MANUFACTURE
AND DISTRIBUTION OF MOTOR VEHICLES
ESTIMATED 1968

	AMOUNT		MEMO: PERCENT OF AVERAGE UNIT RETAIL PRICE
	TOTAL (BILS.)	PER UNIT	
INCOME AND OTHER TAXES PAID BY SUPPLIERS	\$ 3.3	\$ 288	8.3%
FEDERAL EXCISE TAXES	2.6	227	6.6
INCOME AND OTHER TAXES PAID BY VEHICLE MANUFACTURERS, EXCLUDING FEDERAL EXCISE TAXES	2.5	218	6.3
STATE SALES TAXES	1.5	131	3.8
DEALER PROPERTY, INCOME, AND OTHER TAXES	0.4	35	0.9
LICENSE PLATE AND TITLE	0.3	26	0.7
TOTAL TAXES EXCLUDING EMPLOYE INCOME TAXES	\$10.6	\$ 925	26.6%
INCOME TAXES PAID BY EMPLOYEES OF MANUFACTURERS AND SUPPLIERS	3.2	279	8.1
TOTAL TAXES	13.8	\$1,204	34.7%



That is why this bill is a threat to the entire American economy and to every person in America.

We are most gravely concerned about Section 202 of the Subcommittee's bill which freezes into law emission standards for 1975 models that are 90 percent below the 1970 levels and lower than we know how to meet. If these standards become fixed in law, the technology as we know it today would not permit us to build cars after January 1, 1975.

We have learned much in the past few years about how to control emissions from vehicles. We expect to learn more in the next two or three years. However, unless the science and technology of emission

SECTION 202

standards shall, at the minimum, represent (i) for those air pollution agents for which emission standards were in effect prior to the date of enactment of this Act, a ninety per centum reduction from allowable emissions for 1970 model year vehicles or engines, and (ii) for those air pollution agents for which no emission standards were in effect, a ninety per centum reduction from the average of such pollution agents as actually measured from 1970 model year vehicles or engines,

control move ahead much faster than we believe is possible, we will not be able to meet the standards prescribed by the bill.

This is not a question of how determined we are to control air pollution from cars, nor is it a question of how much we are willing to spend. No matter how much we spend and how many people we assign to the task, we do not think we can do it by January 1, 1975. As though recognizing the futility of its proposed standards, the Subcommittee also calls for repeal of the requirement that economic costs and technological feasibility must be considered in establishing emission standards. Under this bill, we would be directed to reduce all emissions by 90 percent even if nobody knows how to reduce emissions by 90 percent.

The bill is not asking for a 90 percent reduction from scratch in automobile emissions. It is asking for a 90 percent reduction in what is left after we have already removed most of the emissions that used to come out of cars.

Sec. 201. This title may be cited as the 'Motor Vehicle Air Pollution Control Act'.

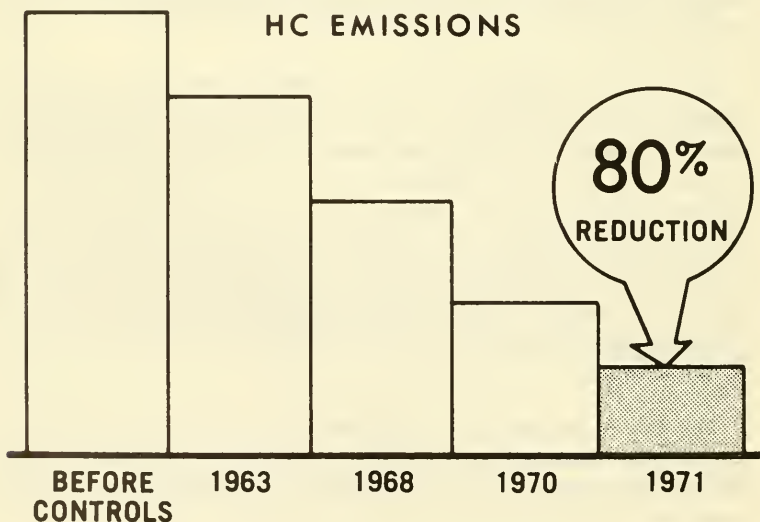
Motor Vehicle
Air Pollution
Control Act.

Sec. 202. It shall be the policy of the United States to promote technological feasibility and economic costs, appropriate preservation of any kind of vehicle or new vehicle which contribute to, or are likely to cause or to continue to, air pollution which endangers the health or welfare of any persons, and such standards shall apply to such vehicles or engines whether they are designed

79 STAT. 992

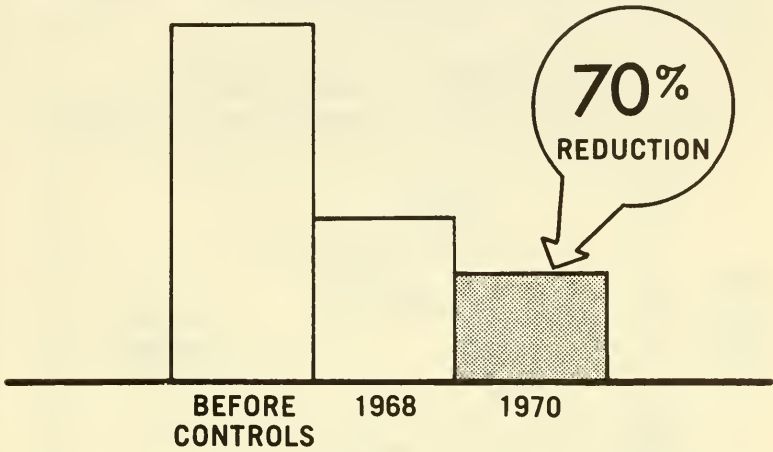
EXCERPT FROM 1967 CLEAN AIR ACT.

Our first controls were installed on 1961 cars in California and nationwide in 1963. These controls completely eliminated the 20 percent of hydrocarbon emissions that used to come out of the crankcase. Exhaust emission controls were first required in California in 1966 and nationwide in 1968. The 1971 standards and the technology to meet them will produce an 80 percent reduction in hydrocarbons, as measured by the Federal government's present test procedures.



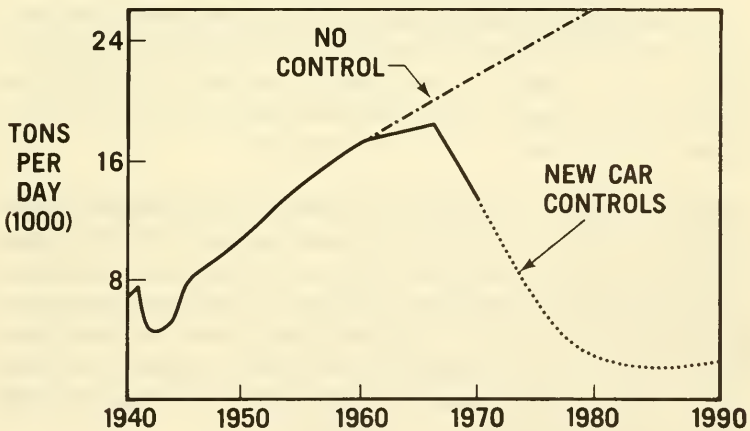
A 70 percent reduction in carbon monoxide has already been achieved.

CO EMISSIONS



Because of these efforts, the total air pollution from cars has passed its peak and is now on the way down. It will continue to drop, as new cars replace older cars without controls, even if no change is made in

HC EMISSION IN LOS ANGELES

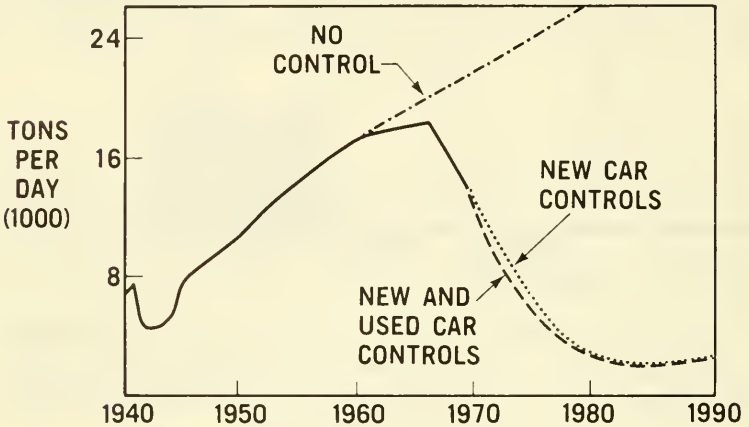


the standards, and in spite of the expected growth in the number of cars in use.

It would drop even faster if emission control systems were installed in the 60 million precontrol cars that are still in use.

HC EMISSION IN LOS ANGELES

Effect of Used Car Controls – 1959-1965 Models Upon Resale



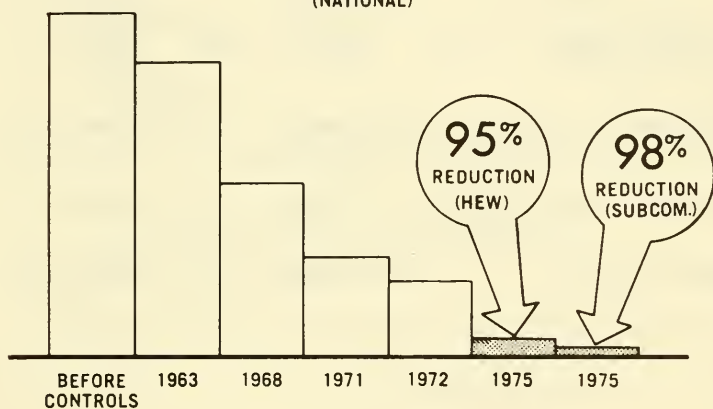
Ford has developed such a system for use on precontrol cars and has applied for accreditation from the state of California. If approved, it will be sold at a suggested retail price of less than \$10 and will take about an hour's labor to install. If the engine is in decent shape, this system will reduce emissions by 30 to 50 percent.

We know, however, that the big reductions already achieved are not big enough. Last year, California tightened standards for 1970 through 1974. Since last year, the Federal government has been matching or outdoing California in stringency. In January, California adopted very stringent requirements for a "smog-free" car by 1975. In February, the Department of Health, Education and Welfare proposed even more stringent controls for hydrocarbons (HC), carbon monoxide (CO) and oxides of nitrogen (NO_x) for 1975 models.

These proposed standards, using the Federal government's present test procedures, would reduce hydrocarbon exhaust emissions by 95 percent from the precontrol level. Carbon monoxide emissions would be reduced by 86 percent. Emissions of oxides of nitrogen and particulates, which are not controlled now, would be reduced by 83 percent and 67 percent, respectively. Although we are not certain how we are going to do it, Ford Motor Company intends to meet these very low levels — and to meet even lower levels as soon as we can.

HC EMISSIONS

(NATIONAL)



Although the Federal government's proposed 1975 standards were based on a thorough assessment of the maximum reduction that would be technologically feasible, they have now been topped by the 1975 standards proposed in Section 202 of the Senate Subcommittee's bill. These latest proposed standards would result in exhaust emission reductions from pre-1968 levels of 98 percent in hydrocarbons, 97 percent in carbon monoxide, and 90 percent in oxides of nitrogen and particulates. We believe these levels are unrealistic for 1975. They

would produce a very small improvement in air quality, compared to the government's proposed standards, but the engineering task created by the bill would be virtually undoable in the time allowed.

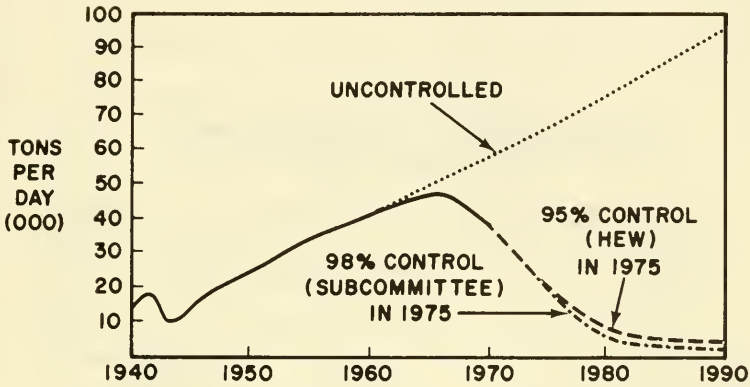
PERCENT REDUCTION FROM PRE-CONTROL VEHICLES

	<u>HEW 1975</u>	<u>SUBCOMMITTEE 1975</u>
HYDROCARBONS	95%	98%
CARBON MONOXIDE	86%	97%
OXIDES OF NITROGEN	83%	90%
PARTICULATES	67%	90%

It's just like playing golf. If you're a 130 golfer, it's easy to take 10 strokes off your average with one lesson and a few rounds of practice. But if you average 75, it may take a couple of years and a small fortune to get down to 74, and none of your friends will ever notice the difference.

Just how little difference the Subcommittee bill would make in the quality of the air is shown by these charts. As far as exhaust hydrocarbons are concerned, once we get to 95 percent control, as proposed by HEW, the additional 3 percentage points demanded by the Subcommittee bill would make hardly any difference.

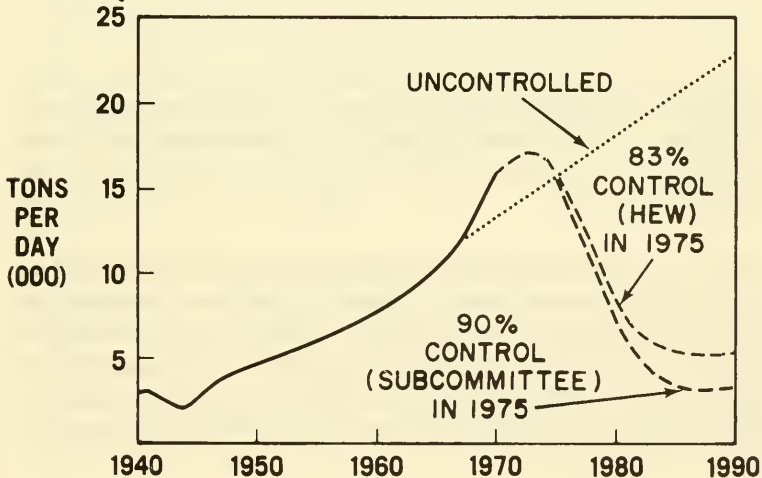
NATIONWIDE AUTOMOTIVE HC EMISSION



nitrogen

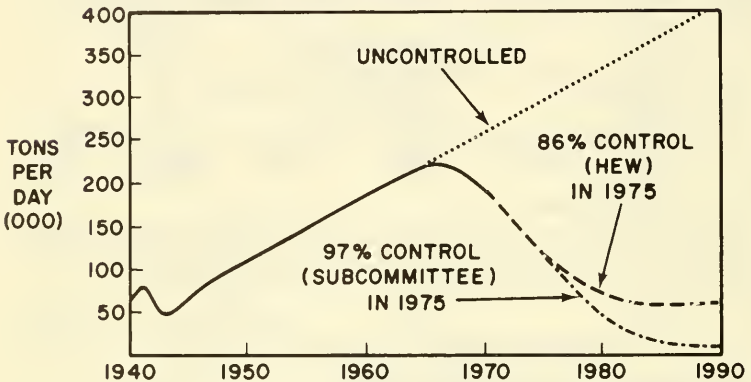
As far as ^{nitrogen}oxides are concerned, changing from 83 percent to 90 percent control would again make relatively little difference.

NATIONWIDE AUTOMOTIVE *nitrogen Oxide* EMISSION



With respect to carbon monoxide, the difference would be greater — but would still be small compared to the effect of the 70 percent reduction we have already achieved.

NATIONWIDE AUTOMOTIVE CO EMISSION



We are not opposed to either the level alone, or the timing alone, of the emission standards specified in the Subcommittee bill. We are opposed to freezing into statute both arbitrary standards and an arbitrary effective date.

The reason for having emission standards is to provide air that all of us can breathe without danger to health. Regardless of whether the source of air pollution is an automobile, a power plant, a factory or an incinerator, the emission standards for that source obviously should be related to the national air quality standards that the Secretary of Health, Education and Welfare is directed to establish by Section 110 of this same bill in order to protect the public health.

SECTION 110

“(3) National ambient air quality standards, proposed and promulgated pursuant to paragraphs (1) and (2) of this subsection, shall be ambient air quality standards the attainment and maintenance of which are necessary to protect the health of persons. Such standards shall be revised, as necessary, in the same manner as promulgated.

To freeze into the statute a 90 percent reduction from present levels of all emissions from 1975 automobiles, before the national air quality standards are set, is to put the cart before the horse. This would prevent the Secretary from setting emissions standards at what ever level may be needed to achieve desirable air quality standards, and may be feasible at any particular date.

New knowledge about the chemistry and biology of air pollution and the technology of pollution control is being developed daily. Sound clean air goals can be established and achieved only if responsibility is given to an administrative agency that has the flexibility to respond to new technical information. It cannot be achieved by freezing into law arbitrary emission standards and timing that are neither scientifically justified nor technically feasible.

We therefore believe that Section 202 should be revised so as to require the Secretary to reevaluate the 1975 vehicle emissions standards he has already proposed in the light of the national air quality standards he must establish under this Act. He should be directed to set emission standards as stringent as is necessary, within the limitations of available technology, to achieve the air quality standards necessary to protect the public health.

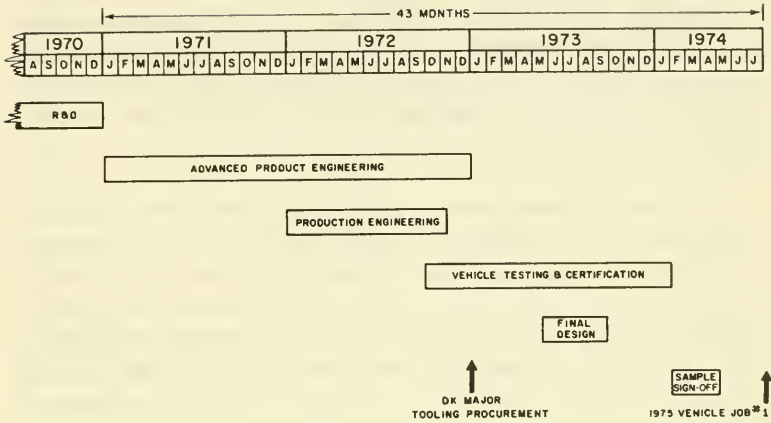
We have no objection if Congress wishes to establish 90 percent tightening of the 1975 vehicle emission standards as a general guide for the Secretary. But we believe he should have the flexibility to set 1975 standards for any particular pollutant at either a higher or a lower level, depending on his findings as to public health needs and technical feasibility.

These new emission standards should be established no later than January 1, 1972, and should become effective with the introduction of 1975 models, or after January 1, 1975. Such a schedule would allow only two-and-a-half years between the establishment of 1975 model standards and the beginning of 1975 model production. We must have an absolute minimum of two years to perfect the technology and make the changes in vehicle designs and manufacturing plants that will be needed to comply with standards that are based on established technical feasibility.

The timing of new standards is as crucial as the level of new standards in determining their practicality and their cost to the public. Cars are complex, mass-produced machines that are operated under widely varying conditions. Any hasty change in their design leads inevitably to both higher costs and reduced reliability. Our normal schedule for the introduction of new product features allows 43 months of lead time from the initial invention of a new approach to production. Simple changes can be accomplished in less time. Complex changes, such as the introduction of new emission control concepts, would normally take more time. Production lead time can be compressed, but only within limits and, even within those limits, usually at a cost that is out of proportion to the time saved.

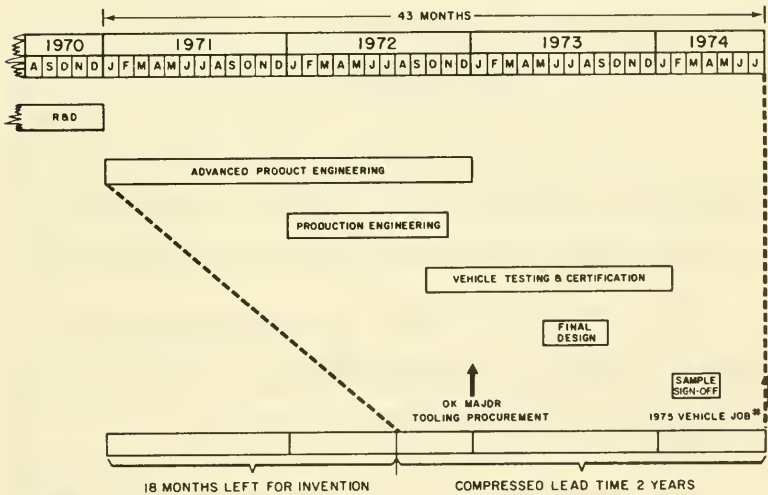
If the Subcommittee's bill is enacted into law in its present form by the end of this year, only three-and-a-half years will be left until the beginning of 1975 model production. This just happens to be our normal production lead time, but the processes involved in production lead time cannot be started until new approaches are invented, and the new approaches needed to meet the standards in the bill have not yet been invented. Even if the production lead time for 1975 emission control systems is compressed to the absolute minimum of two years,

TIMING REQUIREMENTS



we will have only 18 months left to invent new emission control approaches before we have to start getting them ready for production.

TIMING REQUIREMENTS



Necessity may be the mother of invention, but not even Congress can guarantee that the gestation period will be 18 months or less. Everything we know about the problem indicates that the gestation period will be longer than 18 months, and that is why we believe that it is virtually impossible to meet the level and timing of the standards specified in the bill.

Even if the standards could be met by 1975, the schedule required to meet them by that date would multiply both the costs to the public and the problems customers have with their cars. The standards section of this bill is inconsistent not only with the minor improvements in air quality it would produce, but also with the Subcommittee's desire to assure trouble-free operation of emission control systems for the lifetime of the car. This desire is evident in the warranty provisions of the bill.

Section 207 would require a 100,000 mile (or ten year) warranty that emission control systems would continue to perform as required by the standards. Even if we had all the time in the world to perfect a fool-proof system to meet the emission standards set forth in the bill, a warranty intended to assure perfect performance for 100,000 miles would be completely unenforceable and impractical.

SECTION 207

(2) that such systems or devices will be effective for the lifetime emissions of such vehicles or engines if properly maintained, serviced, and operated. Normal service in an urban area or its equivalent for one hundred thousand miles or ten years, whichever is lesser, shall be taken as the basis for lifetime emissions under this section.

Since the proposed warranty would be based on emission levels, it would require some way to measure emissions from vehicles in use. There is, however, no way to measure emissions in the field with results that would correspond to the results of the original certification test. Furthermore, there would be no way for a dealer making a warranty repair on an emission control system to know if he had brought the vehicle into compliance. The equipment and engineering ability needed to measure emissions accurately will not be available and cannot be made available in dealers' service departments in the foreseeable future.

You can't just stick a gadget up a tailpipe and get a good reading in a few minutes. To check one car against the standards takes about \$50,000 worth of equipment, several trained technicians and 13 hours. To test large numbers of cars would require test stations throughout the country, each with whole batteries of \$50,000 test cells and scores of trained technicians.

In addition, there is no way to determine if a vehicle that has been in service for several years or many miles has always been "properly maintained, serviced and operated," as the bill specifies, and therefore there would be no way to determine when an owner's warranty is valid and when it is not.

Experience has taught us that there is no fair and reasonable way to administer such warranty provisions. Often there is no way to determine whether a repair is needed because of a defect in the original product or because it was abused or neglected by its owner. These problems would be multiplied many times over by a warranty intended to assure performance rather than to protect against defective parts — especially when that warranty runs for 10 years or 100,000 miles.

We support the purpose of this subsection, however, and therefore we recommend that the language be changed so that it requires the manufacturers to warrant that emission control systems are essentially the same as in the prototypes certified by the Department of Health, Education and Welfare and are free of defects in materials and workmanship.

For these same reasons, we oppose the provisions of Section 207 governing recall and repair. These sections would require manufacturers to recall and repair vehicles based on failure to perform at the level required by emission standards. We would, however, support such a requirement if it were limited to the terms suggested here for emission control system warranties.

SECTION 207

“(3) The notification to such purchasers provided for in this subsection shall contain a clear description of the nonconformity, a statement of measures to be taken to remedy such nonconformity, and a commitment of the manufacturer to cause such nonconformity to be remedied at no cost to the owner.

Other provisions of the bill are also unenforceable or impractical. Section 207 would require the suggested retail price sticker to contain a statement of the actual costs to the manufacturer of emission control systems, including installation and warranty. It is impossible for a manufacturer to comply with this requirement. To mention only one reason, there is no way to determine in advance warranty costs that are not incurred until long after the car is sold.

Section 210 appears to give each state authority to set new vehicle emission standards more stringent than the national standards. We could no longer manufacture cars at reasonable cost if we had to produce many different designs to meet many different standards and test procedures in different parts of the country.

There is also room for improvement in the sections of the bill dealing with stationary sources of air pollution. As we understand it, Section 110 of the Subcommittee's bill would require the Secretary of Health, Education and Welfare to publish national air quality standards necessary to protect the health of persons, but Section 112 would permit states to set more stringent standards for any air quality region. An industry that operates in all 50 states must know exactly what its responsibilities are with respect to clean air. It cannot be subjected to 50, 80, or 180 different and changing standards.

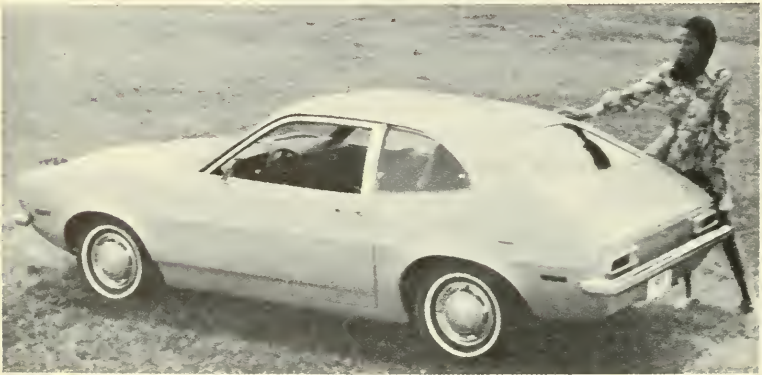
Section 113 provides that new factories (or old factories which are modified) be certified as to compliance with emission standards at their stacks. We endorse this approach, but we think it should be applied to all stationary sources of pollution. Clean air cannot be achieved if new plants are controlled while old plants are not.

We oppose Section 304 which would permit individual citizens to bring suits against polluters or against the Secretary of Health, Education and Welfare. If individual citizens are authorized to sue the Secretary to force him to establish more stringent standards, companies will never know what standards they will be required to obey. A multitude of individual suits would only add to overcrowding of court schedules, bedevil both the Secretary and those who are regulated and slow down the fight for clean air.

As I stated at the beginning, we support the intent of the bill, but we are opposed to some of its provisions because they would produce minimum air quality improvements at maximum cost to the public.

We believe that the government should establish whatever air quality standards and emission standards are necessary and feasible to protect the public health. We believe that whatever costs are necessary to meet these standards must be paid. But we also believe that the public should not be asked to pay more than is necessary.

The American automobile industry is now beginning a crucial effort to turn back the rising tide of imported cars. Last month, imports captured more than 17 percent of the U.S. car market. In two days, Ford will introduce the Pinto, a new small car designed to compete head-on with the most popular imports and beat them in their own field.

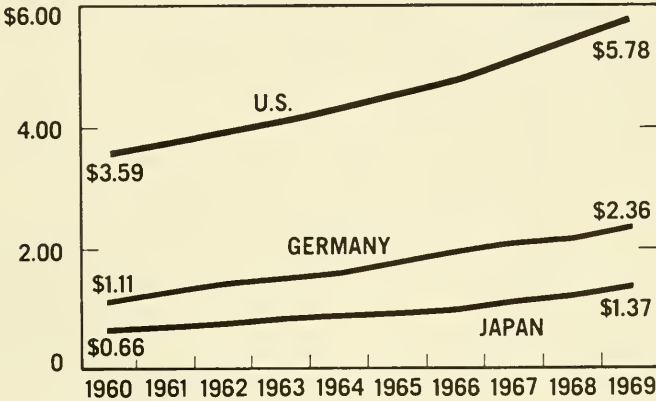


To beat them, we have to keep our prices in the same neighborhood as their prices. If we are compelled by hasty and ill-considered legislation to raise our prices more than is necessary to achieve clean air, the struggle against imported cars could be lost.

It is true that imported cars will also have to meet whatever emission standards are established. But foreign manufacturers will be building new emission control equipment at hourly labor rates that range downward from one-half to one-quarter of the rates we must pay even before our current negotiations with the UAW are settled. The more cost is added to cars, the greater the advantage that foreign manufacturers will have because of their lower labor rates.

U.S. AND FOREIGN AUTOMOTIVE HOURLY LABOR COSTS 1960-1969

COST PER
HOUR WORKED



We believe the American people and the members of Congress should have these facts before Congress takes final action on the Clean Air Act.

MANUFACTURING CHEMISTS ASSOCIATION

MANUFACTURING CHEMISTS ASSOCIATION,
Washington, D.C., September 1, 1970.

Hon. JENNINGS RANDOLPH,
Chairman, Committee on Public Works,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: As your Committee acts on the "National Air Quality Standards Act of 1970" we respectfully request that it consider the views of the Manufacturing Chemists Association (MCA), particularly as these refer to legislative concepts and statutory language not present in any of the bills on which we were privileged to testify during the hearings held by the Subcommittee on Air and Water Pollution last spring.

The Manufacturing Chemists Association is a nonprofit trade association of 170 United States company members representing more than 90% of the production capacity of basic industrial chemicals within this country, with a vital interest in clean air and the routes taken toward its achievement.

A major innovative concept incorporated in the bill is the proposal to establish separate abatement programs and enforcement procedures for (a) the control of community or area-wide pollution from multiple, scattered sources, (b) the control of local pollution problems in the immediate vicinity of industrial or commercial point-sources, and (c) the protection of health from those atmospheric pollutants of high and specific toxicity, such that the degree of control required for the protection of health may be far greater than that needed to eliminate pollution obvious to our physical senses. We welcome the recognition by your Committee of the wisdom of tailoring their attacks on these varying problems to the specific characteristics of each—their origins and the means available for their solution.

The development of a body of law and regulatory controls to implement such a concept must necessarily proceed in a stepwise fashion, and inevitably the path traced toward its ultimate objective will, viewed in retrospect, deviate from the straightest and most direct route. To the degree that the enunciation of this concept in the basic legislation is clear and explicit, providing sharply delineated goals, and machinery for the early detection and prompt correction of misdirected efforts, our progress toward a pollution free environment will be speeded and straightened. The comments made in the following paragraphs are offered in the sincere hope and belief that our suggestions will prove helpful in developing a more efficient, more expeditious, and more effective national air resources management program.

A primary requisite for the success of a program based upon a division of multiple elements into a series of mutually exclusive categories is a means for establishing the categories and for prompt, impartial and equitable resolution of disagreements over the assignment of borderline cases. In our judgment, the proposed legislation, in its present form, falls short of this standard.

We recognize the difficulty in formulating statutory prescriptions that are precise as to intent, and acknowledge the need to provide the Secretary with latitude for the exercise of reasoned judgment. Precisely for that reason we urge that the Secretary be required to base his judgment on pertinent evidence in a public record, and that the bases for his findings be documented. To that end we ask that the Secretary, before promulgating lists or categories of sources or pollutants subject to abatement or control under one of the other of the alternative routes available to him, hold public hearings thereon, and publish his findings, under the provisions of section 554 of title 5 of the United States Code. The bill, as now drawn, would permit the Secretary to take this initial and determinative step without the participation of those who would be affected, leaving the hearings or written comment machinery with only the setting of administrative details.

More specifically, we refer to the following provisions: (1) Section 109(a)(1) under which the Secretary, by publishing a list in the Federal Register, without any requirement for consultation, hearings or the consideration of comments, makes a final determination of those pollutants to be abated through the complex, expensive and time consuming machinery of section 110, and 111.

(2) Section 113(b)(1), which authorizes and directs the Secretary, with even less statutory guidance as to congressional intent, to publish a list of "categories of stationary sources which shall be subject to the standards of performance established under this section."

(3) Section 114(b) which similarly directs the Secretary to make a final determination of "selected air pollution agents or combinations of agents for which *he deems* (emphasis added) that emission standards are appropriate . . ."

(4) Section 115(a)(1) under which a similar publication of a list in the Federal Register determines that any air pollution agent so included shall be subject to abatement under either Section 114 or 115. In this instance such publication would result automatically in the *total prohibition of emissions* of such agent, even though the only standard for its inclusion in the list is "available material evidence," and the only exceptions from such prohibitions would be rigidly restricted.

As the Secretary evaluates the evidence submitted at public hearings, relative to the inclusion or exclusion of any proposed item from such list, he should have to guide him statutory language adequate to express clearly the intent of the Congress. Whereas we would assume it to be the intent of Section 109(a)(1) that the air pollution agents for which criteria are to be issued are those that constitute a present or imminent hazard to the health and welfare as a result of their emissions from numerous and diverse sources, a strict construction of the language conveys no such required cause and effect relationship.

The definitions of Section 113(a)(1), 114(a)(1), and 115(b) are even less precise and unquantitated. We urge that if these definitions cannot be greatly tightened in the deliberations of your Committee, the Committee Report provide carefully phrased language to provide guidance to both the Secretary and the courts as to the congressional intent.

Among the suggestions we would offer for the improvement of the language in the cited sections are:

In Section 109(a)(1)(A), insert "public" before "health" to read "(A) which have, or may be expected to have, an adverse effect on *public* health and welfare;".

We would assume that the term "public" has been deleted from the phrase as used repeatedly in other sections of the bill to make it clear that the effects of air pollution agents upon the more sensitive elements of our population—the very old, the very young, those with severely limited respiratory function reserves—should be considered by the Secretary, and we would certainly agree it appropriate for him to do so. A similar intent would seem to be involved in Section 110(a)(3), and again in this case we would urge the substitution of "public health" for the phrase "health of persons." Our reasons for so doing are twofold.

Firstly, whereas we agree that society has a responsibility to protect the more vulnerable segments of its population, that limit of social service required to protect the most sensitive individual is too vague and uncertain a standard to constitute a proper statutory definition. Secondly, the implications of such a definition are particularly far reaching were it to be accompanied in the bill by the "Citizen Suits" provision of Section 304. The vulnerability of the Secretary and all pollution control officials, as well as that of industry and commerce, to suits of harassment would be multiplied endlessly by the provision of so tenuous and variable a standard in the law.

In similar vein, we urge that the word "adverse" be inserted before "effects" in line 5, page 10 of Section 109(a)(3)(C), and again in line 19, page 12 of Section 110(b). The "goals" defined in these phrases are made the basis for performance standards, emission standards, etc. to be applied immediately to designated categories of sources. The addition to these standards of a requirement for protection against trivial effects, without any adverse implications, would greatly complicate the administration of the entire national abatement program and multiply wasteful economic burdens.

One provision of Section 109 that we feel to be a backward step in the development of efficient and effective implementation plans is its downgrading the status of the information on recommended pollution control techniques. Section 109(b)(1) would amend the provisions of Section 107(c) of PL 90-148, by disassociating the control techniques document from specific coordination to the criteria document for any particular air contaminant, both as regards the appropriateness of the recommended control techniques for the abatement of emissions of that pollutant and as to the necessity (or adequacy) of the recommended control techniques for the attainment of any levels of air quality identified in the criteria document. These changes, taken together with the elimination of the publication of the

recommended control techniques document from the conditions to be met to "start the clock running" in the timetable for compliance by the states (Section 108(C)(1) of PL 90-148) substantially negate the value of the control techniques documents.

Whether or not one accepts the concepts enunciated by Senator Muskie at his press conference August 20, to the effect that it is not the responsibility of the federal government to tell industry how to control its processes, the control techniques documents would have a real value to the state agencies in their drafting of implementation plans to achieve maximum degrees of pollution control with the least unnecessary economic hardship and disruption of its industry, if these documents were available at the time the implementation plans are being drawn. Without such currency, their value will be greatly diminished.

This consideration is of increasing significance in today's political climate of mistrust of industry and a consequent lessened role of industry on the boards and technical advisory committees of the state and regional agencies.

The provisions of Section 113(b)(2), establishing performance standards for designated categories of new stationary sources, fails to give explicit recognition to the basic fact that "the greatest degree of emission control . . . achievable" cannot be defined without explicit recognition of the economics of the industry and the need to justify any given degree of control on the basis of the significance of the effects from any lesser degree. Where cost is no barrier, almost any given degree of control can be achieved. Where the degree of risk justifies such expenditures the ultimate level of control can be approached closely, as has been shown in the nuclear energy and nuclear weapons programs.

The requirement of the same degree of control for a powerplant stack as for an atomic bomb plant is manifestly both impractical and unnecessary. Only by specific recognition in the law of this need to evaluate both effects and economics can either enforcement agencies or industry secure any degree of protection from harassment by citizens suits. Such statutory recognition should be general, applying to all standards beyond those shown necessary for the protection of public health.

A specific and particularly insidious example of unattainable standards is involved in Section 115 of this bill, which would impose a "prohibition of emissions" of all substances designated by the Secretary as "hazardous to the health of persons," unless the Secretary, within a specified time, subsequently makes a specific exemption. We have already commented upon the administrative procedures involved, but we wish to state also our most vigorous objection to the entire concept of "prohibition of emissions", or "zero tolerance" standards.

There are several very basic reasons why we feel the "zero tolerance" concept is arbitrary, unenforceable and inequitable. The first of these is that whereas "zero" is a valid mathematical concept, it does not exist in nature. Elements such as beryllium and cadmium, which have been mentioned in the hearings of your Subcommittee as candidate materials to be classified as "extremely hazardous," are ubiquitous in nature. To say that they do not occur in any sample of any substance merely expresses the case that they have not been sought for in that substance with analytical tools of adequate sensitivity.

A second consideration is that, by permitting an administrative agency to set a "zero tolerance" on any contaminant, it is encouraged to bypass the often difficult but nevertheless essential step of identifying and justifying a real value based upon a rational consideration of the evidence. Even in the matter of ionizing radiation, for which the assumption of a linear extrapolation of dose-response relationships from measurable-effects down to zero-effects dosages has the widest acceptance, the validity of this technique is seriously disputed by many of the nation's most competent scientists. With respect to chemical toxicants, the "threshold" concept enjoys general acceptance. There is no consensus that dosages below the threshold level have any deleterious effect upon those so exposed.

A third consideration is the physical impossibility of operating any process with a zero emissions tolerance for any trace element. Even the most sophisticated laboratory equipment cannot reduce concentrations to zero, and for commercial equipment, best possible performance is still farther from that limit. Since these elements are ubiquitous in all raw materials, a zero tolerance for any of them, if enforced, would shut down not only the processes designed to handle these toxic materials, but all industrial activity.

A fourth consideration is the dependence of nominal conformance to the standard upon factors unrelated to either the process or the alleged hazards from its emissions. "Zero," in practical terms, means "below the limits of detectability

with available techniques." Thus a process or plant in nominal compliance today may constitute a violation tomorrow because someone, unrelated to either the plant or the enforcement agency, has developed a more sensitive or specific analytical tool.

Since "zero" cannot be measured, neither can it be enforced. The illogic of the entire zero tolerance concept is ably presented in the 1965 report of the National Research Council Committee on Pesticide Residues.

We particularly invite your attention to recommendations 1 and 2 of this document, which read:

"(1) The concepts of 'no residue' and 'zero tolerance' as employed in the registration and regulation of pesticides are scientifically and administratively untenable and should be abandoned.

"(2) A pesticide should be registered on the basis of either 'negligible residue' or 'permissible residue', depending on whether its use results in the intake of a negligible or permissible fraction of the maximum acceptable daily intake as determined by appropriate safety studies."

These recommendations are as pertinent and valid with respect to air contaminants from socially useful industrial operations as they are to pesticide residues. We urge that your Committee, as did the referenced National Research Council Committee, reject the "zero tolerance" concept in its entirety, and direct the Secretary to base his control of those air contaminants that he deems "hazardous to the health of persons" on a consideration of "negible" or "permissible" limits justified on the basis of reasonably anticipated effects.

We wish also to suggest changes related to administrative provisions of the law, as distinguished from basic statutory concepts.

One of these concerns the potential conflicts in jurisdiction, and the inevitable controversies inherent in Section 111(a)(2)(D). Very few, if any, state pollution abatement agencies now have the authorities here proposed to be made a basis for federal approval of a state implementation program, and it would be almost impossible for a state to adopt suitable enabling legislation within the prescribed time limits. Even were it to do so, jurisdictional conflicts between the state pollution abatement agencies and other state or federal regulatory agencies (FAA, ICC, etc.) would be inevitable.

The bill implies that, if the Secretary rejects a state implementation plan on the grounds that it does not meet the requirements of the cited section, he will promulgate a federal plan that does. This would put the federal government squarely, as does Section 113(d)(1)(A), into land use and zoning authority at the local level. We urge that your Committee consider most carefully the implications of such a step.

During the hearings held by the Air and Water Pollution Control Subcommittee last spring, the concept of federal ambient air standards received wide support on the basis that the need to hold the tedious and divisive ambient air standards setting hearings at the state level would be eliminated. However, Section 111(a)(2)(K) would negate any such advantage, by requiring each state to hold "public hearings to consider adoption of ambient air quality standards more restrictive than the national ambient air quality standards" as a prerequisite to approval by the Secretary of its implementation plan. Section 112 already guarantees each state this right. We see no advantage in the required hearings of Section 111(a)(2)(K) and urge the deletion of this subparagraph.

An apparent inconsistency exists between subsections (d)(1) and (g)(1)(A) of Section 113. The former would require a showing of operation in compliance with the designated standards as a prerequisite for certification of the plant involved; the latter would prohibit any operation before certification.

Section 111(a)(2)(F) requires of state implementation plans that all reports on the "nature and amounts of emissions of any air pollution agent or combination of agents" be made public. We urge that the public record requirement apply only to those emissions data the Secretary may reasonably require to determine whether such source is in compliance with applicable standards. We feel that, particularly in the chemical industry, the publication of qualitative and quantitative data on trace emissions not subject to specific emission standards may unnecessarily compromise proprietary and trade secret data.

Section 117, "Federal Enforcement" fails to provide a mechanism whereby an alleged violator may comply with an abatement order by the Secretary and then challenge the validity of that order. As now written, this section would appear to require such person to disobey the order, with all the consequent liabilities, before he has standing in court to contest the order. We do not believe this to be equitable or conducive to orderly administration.

The provisions for judicial review (Section 116) would seem to be unduly restrictive with regard to the time limits and bases for challenge of any standard or order of the Secretary. In particular the 30-day limit for filing of challenges to the judgment of the Secretary, based upon his evaluation of the record, when coupled in many instances with the absence of a public record, would seem to be inequitable, and would encourage a deluge of actions in an effort to establish a standing in court within the 30-day period.

We suggest that the court be given authority to accept an action at a later date upon a showing by the plaintiff of a reasonable cause for not filing within the initial 30-day period. We also urge that, in the interest of clarity, whenever in the bill the language "Any determination of the Secretary. . . shall be presumed correct" appears it be amended by the inclusion of the clause "When supported by the weight of the evidence, taken as a whole." Provisions for the court to evaluate the evidence are of particular significance because, in the frequent absence of public hearings, the record will consist of statements, letters, etc. which have not been submitted under oath or subject to cross examination.

The matter of citizen suits, in Section 304, is one that gives us deep concern. The right of the citizen to have effective and vigorous implementation of our abatement program is beyond question; the need to protect both our agencies and industries from trivial suits and harassment by professional litigants is no less real. We urge that this section be dropped from the present bill and the entire question be subsequently considered at greater length than time now permits. By the next session of the Congress experience with comparable measures in the states may provide far better guidance in the drafting of a citizen suit measure that can achieve both a balance of rights and machinery that will not swamp our federal courts.

We appreciate this opportunity to comment on the bill now before your Committee, but must qualify the completeness of the positions expressed in this letter by calling to your attention the shortness of the time that has been available for our study of this bill since its release by the Subcommittee.

If during your deliberations, you should feel that it would be helpful to you or your staff for us to develop in greater detail any of the points we have raised in this communication, we would be most pleased to make our staff available to you for such purpose.

Sincerely,

W. J. DRIVER.

MANUFACTURING CHEMISTS ASSOCIATION,
Washington, D.C. August 26, 1970.

HON. JENNINGS RANDOLPH,
Chairman, Committee on Public Works,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: Earlier this week I wrote to express our concern over some of the newly added provisions in the Subcommittee version "National Air Quality Standards Act of 1970" which were not present in bills considered during hearings held last March.

While we have not had time to fully analyze the new provisions and their impact on the economics and existing abatement programs of our industry, we would like to indicate certain of our areas of concern as delineated in the attached comments. It is hoped the Committee will consider these comments constructive and helpful.

With respect to the "zero tolerance concept" we hope you will consider our views as expressed in a recent letter to Rep. Paul Rogers, Chairman of the House Subcommittee on Public Health and Welfare, a copy of which is also appended.

We require additional time in which to determine the consensus of our member companies on those provisions on which we were given no prior opportunity to study or comment. It is respectfully requested that the Committee delay action on this bill until after the Labor Day recess so that we may assess the implications and potential effects of this legislation on our industry which operates 14,000 plants and employs more than one million workers.

With kind regards,
Sincerely,

JIM MORTON.

Section 109(a)(1)(A) line 4, page 9

insert "public" in . . . effect on *public* health and welfare

The apparent intent of the bill is to proceed under the provisions of Sections 109, 110, and 111 to set standards and goals, and require implementation plans for the abatement of pollution from those agents that are pervasive and that constitute a threat to the "public health and welfare" in its broad and classical sense. This is the language used in subparagraph (1)(C), line 9, subparagraph (3)(A), line 23, and (3)(B), page 10, lines 3 and 4.

Section 109(a)(2), line 16, page 9

effects on *public* health and welfare

Comments on preceding revision apply.

Section 109(b)(1), page 10

This section amends the provisions of PL 90-148, Section 107(c) by disassociating the control techniques document from specific coordination to the criteria document for any particular air contaminant, both as regards the appropriateness of the recommended control techniques for the abatement of emissions of any pollutant identified in a specific criteria document, and as to the necessity (or adequacy) of the recommended control techniques for the attainment of any levels of air quality identified in the criteria document. These changes, taken together with the elimination of the publication of the recommended control techniques document from the conditions to be met to "start the clock running" in the timetable for compliance by the states (Section 108(C)(1) of PL 90-148) substantially negate the value of these documents.

Whether or not one accepts the concepts enunciated by the Senator from Maine at his press conference August 20, to the effect that it is not the responsibility of the federal government to tell industry how to control its processes, the control techniques documents would have a real value to the state agencies in their drafting of implementation plans to achieve maximum degrees of pollution control with the least unnecessary economic hardship and disruption of its industry, if these documents were available at the time the implementation plans are being drawn. Without such currency, their value will be greatly diminished.

This consideration is of increasing significance in today's political climate of mistrust of industry and a lessening role of industry in the boards and technical advisory committees of the state and regional agencies.

Purpose, to maintain consistency of language with such sections as 113(b)(2), page 23, line 17, which, because of the clarity of its statement, is to be preferred.

Section 110(a)(1), line 21, page 11

"promulgate such national ambient air quality standards *with such modifications as he deems appropriate.*"

Section 110(a)(2), page 12, line 1

insert: ". . . and recommended control techniques" following "criteria"

Section 110(a)(2), page 12, line 4

same as above

Section 110(a)(3), page 12, line 12

"protect the *public* health."

Purpose of change, for consistency of language throughout Act, and to clarify intent. Whereas the desire to protect the more sensitive elements of the population from adverse effects of air pollution is laudable, the degree of hypersensitivity in this portion of our population is represented by a continuum that becomes increasingly tenuous and difficult to define as we get farther and farther out on the tail of the distribution curve. When the number of persons involved becomes so small that the term "public health" is no longer appropriately applied to their well-being, it would seem inappropriate at this time to make their hypersensitivities the basis for the promulgation of national ambient air quality standards that must be attained within a rigid time schedule. This is particularly true in light of the marginal capabilities of presently available technology and vigorous competition among rival claimants for priorities in funding to meet social goals.

It would seem that, under the proposed revision of language, we would be doing the same things to abate pollution, but that administrative problems and litigation would be greatly lessened.

Section 110(b) line 19, line 22

Insert "adverse" before "effects" in each instance.

Purpose—Because of the status given "ambient air quality goals" in this bill in sections 111, 113, and 114, it is important to avoid the ramifications implicit in control requirements based on allegations of inconsequential and trivial effects. For example, the Russian literature contains frequent reference to such subtle and unevaluated "effects" as changes in conditioned reflex responses in the presence of various environmental stresses. The concluding comments offered in the preceding paragraph are pertinent here as well.

Section 111(a)(2)(D)

This subparagraph carries very far-reaching implications in terms of conflicting and ill-defined jurisdiction among a wide variety of federal and state regulatory agencies, and in many instances will effectively preclude the approval of state implementation plans because of conflicting authorities under state laws that cannot be resolved by legislative action within the time limits prescribed, even were the state legislators so inclined.

If, by this subparagraph, there is an implication that in the event the Secretary must disapprove a state implementation plan because of the absence of the authorities required therein, the Secretary, in the plan he then promulgates under the provisions of subsection 111(b) will provide such authority, the potential for interagency conflict is multiplied.

It is strongly urged that this subparagraph be dropped as a requirement, and that this entire matter be studied by the President's Council on Environmental Quality, the Environmental Protection Agency, or a Congressional study committee.

The implications of federal arrogation of land use and zoning is liable to prove particularly inimical to cordial federal-state and federal-local relationships.

Section 111(a)(2)(F), page 15, lines 6-8

Delete the requirement that state make emission inventory reports public.

Comment: Whereas some states may elect to make emission reports evidencing compliance or noncompliance with a duly promulgated emission standard public information, this ought not be a compulsory feature of every implementation plan. It may be appropriate to release such reports, comparing actual with emissions allowed under the standards, without company or plant identifications. To make "raw data" available to the public on a routine basis is to encourage harassment and "ambulance chasing" activity without any adequate compensating benefit to the public.

The release of such data on miscellaneous contaminants in the plant effluents may compromise proprietary product, process and production rate information. Whereas it is appropriate for the state or regional agency to have this emissions inventory data, there has been no showing of any significant benefit to the public from the public release of such data.

Section 111(a)(2)(G)

In this subparagraph, and in subsequent sections of the bill, reference is made to requirements for installation of monitoring equipment and methods, etc. This raises a number of significant questions that should be resolved in the bill by more explicit statutory language:

(1) Under what conditions is it intended that government-furnished equipment be installed and operated for the convenience of the government?

(2) Under what conditions is this required to be solely at the expense of the plant operator? What standards of reasonableness as to cost of purchase, installation, and operation are to be adhered to?

(3) When the Secretary is authorized to specify "equipment" and "methods" how is this authority to be hedged to avoid the favored treatment of particular proprietary interests in the sale of equipment, services, processes, methods, etc?

(4) What protection is provided against the requirement of the use of equipment or methods of questionable precision and validity? A better approach might be the tying of standards to specified analytical procedures, or equivalent. To the extent possible, monitoring requirements should be based upon required data output, in quantity and quality, leaving the method of attainment to the options of the operator of the facility.

Section 111 (a) (2) (K) Page 16

Delete in its entirety. The substitution of federally promulgated ambient air quality standards for state or regional standards has been proposed and supported largely on the basis of the advantages in eliminating the red tape, administrative burdens and public controversy that have become apparent in the public hearings required for their consideration. The states would still have the explicitly guaranteed option of adopting more stringent standards (section 112), but to *require* the states to hold public hearings for the specific purpose of considering the "adoption of ambient air quality standards" is to negate the primary advantage of federally promulgated standards and to further burden the states in their already crowded and time-limited schedule for submission of proposed implementation plans. Furthermore, this provision would seem to be quite out of place in this section

Section 111(b)

The implications of this subsection relative to the potential conflict of jurisdictions among regulatory agencies has been commented upon in our remarks concerning 111(a)(2)(D). Other features of this section that should give both the Congress and state agencies concern are:

(1) the failure of this subsection to require the Secretary to give consideration to the record of any hearing held by the state in their efforts to develop an implementation plan, and

(2) the status of state or local officials vis a vis citizen suits filed to demand the enforcement of federally promulgated standards, including emission standards and timetables for compliance, when such state agency had no hand or voice in the development of such standards, for (lines 5-10) "A plan promulgated by the Secretary for any air quality control region shall be the plan applicable to such region in the same manner as if such plan had been adopted by the subject State and approved by the Secretary pursuant to subsection (a) of this section . . ."

Section 111(c), page 17

This section places a different and far more stringent requirement upon implementation plans required to be amended than upon those upon which no such demand has been made. In the former case, adequacy to attain federal ambient air quality standards is the appropriation in approved in the latter the added requirement is that they shall implement ambient air quality goals.

The language of lines 15-19, page 17 leaves the status of presently approved plans in limbo until the Secretary has made his determination. It would be perhaps more appropriate to provide that such plans shall continue in effect until and unless the Secretary determines that they do not meet his criteria for approval under the standards provided in the 1970 revisions to the Clean Air Act.

Section 111(d)(1), page 18

The language of lines 17-22, page 18 is not clear on the sequence of events involved in the revision of an approved state implementation plan in the event the Secretary requires such revision. The Secretary should be required, in his notification to the State of the inadequacy of its plan, to specify the deficiencies he finds and to recommend changes that, in his opinion, will remedy such defect. The time of the start of the "four months" cited in line 20 is not made clear.

Section 111(d)(2)

This subsection contains the same implicit problems noted in our discussion of 111(b), lines 5-10, page 17.

Section 112

This section is silent on any requirement for Secretarial approval of any revised standards and plans authorized by this section. The interpretation of whether or not a proposed change in implementation plan would, in practice, result in a higher level of air quality or a more rapid attainment of a desired level of air quality may not always be capable of a clear and conclusive answer.

Section 113(a)(1)

The definition here given would seem to us inadequate to reflect the intent apparent in Senator Muskie's press conference of August 20, identifying "new major industry plants such as power plants, steel mills, cement plants, etc." as the intended sources to be controlled under the provisions of this section. The term

"endangerment of the public health or welfare" is new to this paragraph and is not defined. We hope to submit suggested language in a later communication but urge the Committee to give this question their careful consideration.

Section 113(b)(1)

We believe that the publishing of the list of categories to sources to be subject to the standards of performance should be subject to the provision of Section 554 of title 5 of the U.S. Code. Once the list is published, only the details of determination of "the greatest degree of emission control . . . achievable . . ." remain subject to negotiation. The requirement of this level of control has already been involved without substantial opportunity for challenge. We urge that public hearings be specified in order that an adequate public record can be made, and on which the need for, and consequences of, the invocation of the controls imposed under this section can be evaluated.

Section 113(b)(2)

This subsection contains no requirement for consideration of economic feasibility. As has been pointed out by a number of witnesses appearing before the Committee, technological feasibility cannot be divorced from economic factors. Any given level of control can be achieved if cost is no object. Without some statutory guidance on cost/benefit factors to be considered by the Secretary, the language of this section appears inadequate to insure the implementation of the section in accordance with the Committee's intent as we understand that intent.

Section 113(b)(4) page 24

This subsection implies a Senatorial recognition of economic factors, for these would appear to be no difference, other than those resulting from economic differences in the limits of achievable levels of control resulting from the size factor cited in this paragraph.

Section 113(d)(1)(B) page 25

This requires performance testing of a new source before certification, but subparagraph (g)(1)(A) makes no provision for operation of a plant for the purposes of performance testing, including the "shake down" period for adjustment of new equipment and the training of operators, etc.

Section 113(d)(1)(D) page 25

This subsection makes no provision for variances in the event that the "greatest degree of emissions control the Secretary determines to be achievable" is inadequate for the attainment of national ambient air quality goals.

Section 113 (e) (2)

This section provides neither procedures nor checks on the authority of the Secretary to suspend state certification. Perhaps reference should be made to the suspension of certification provisions of 113(g)(4). Since certification is contingent on meeting a performance standard, withdrawal of certification should be based on a failure to meet that standard.

Section 114

The language of this section is vague with respect to distinguishing between "selected air pollution agents" subject to abatement under the provisions of this section, and the stationary sources subject to emission standards for such agents.

We believe the procedures for the publication of the lists of agents, or designation of categories of stationary sources subject to the emission standards subsequently promulgated therefore, should follow section 554 of title 5 of the U.S. Code, for the same reasons cited in our discussions of Section 113.

Comments previously made concerning confidentiality of data, requirements for use of specified monitoring methods, etc. apply equally to this section.

Subsection 114(h) refers to the knowing violation provisions of Section 117(b). The cited section appears to provide no procedure for an alleged violator to comply with the Secretary's order and challenge the validity of that order. Only in the event the operator refuses to comply with the order, with all the consequent penalties should he fail in his challenge, can he secure an adjudication of the questions at issue. We believe any such provision to be contrary to the best interests of the public and inimicable to cordial government-industry relations.

Section 115

The points of major concern are:

(1) that the publication of the list referred to in Section 115(a)(1) sets in motion a train of events that, in the absence of specific actions by the Secretary within a rigidly defined and highly confining time schedule, results inevitably in the compulsory promulgation of a zero emissions tolerance for such air pollutants, without any requirement for consultation, hearings or submission of comments before the publication of the list.

(2) the "zero tolerance standard is fallacious in concept and impractical in administration. A letter submitted by the Manufacturing Chemists Association to Subcommittee Chairman Rogers presents the principle points in regard to the zero emissions concept, and we commend it to your attention.

Of particular significance in the present instance is the ubiquitous presence of such elements as beryllium, cadmium, and mercury as trace ingredients in all materials, including all air pollutants. For example, coal fly ash is by far the greatest source of beryllium in the atmosphere. A zero emission tolerance on beryllium would, if enforced, prohibit all burning of coal, even in the boilers and furnaces with the very best available control technology.

The definition of an air pollution agent that is "hazardous to the health of persons" in subsection (h) is very qualitative and vague, and it would be difficult to demonstrate the justification for the exclusion of almost any air pollutant for which criteria have been issued or are now in preparation from this category, including the emission of cigarette smoke from a building ventilatory exhaust system.

MANUFACTURING CHEMISTS ASSOCIATION,
Washington, D.C., May 15, 1970.

Hon. PAUL G. ROGERS,

Chairman, Subcommittee on Public Health and Welfare, Committee on Interstate and Foreign Commerce, House of Representatives, Washington, D.C.

DEAR MR. CHAIRMAN: The language of the new Section 112 proposed to be added to the Clean Air Act by Section 5 of HR 17255 would appear to permit a "zero tolerance" to be set on emissions that are deemed by the Secretary to be "extremely hazardous." We do not regard the "zero tolerance" concept as a useful or valid basis for regulatory control.

The Manufacturing Chemists Association (MCA) is a nonprofit trade association of 174 United States company members representing more than 90% of the production capacity of basic chemicals within this country. MCA is proud of its long record of vigorous support for sound, progressive air pollution control legislation and is concerned over the possibility that the administration and enforcement of the Clean Air Act may become enmeshed in the controversy and litigation that the "zero tolerance" concept inevitably involves.

There are several very basic reasons why we feel the "zero tolerance" concept is arbitrary, unenforceable and inequitable. The first of these is that whereas "zero" is a valid mathematical concept, it does not exist in nature. Elements such as beryllium and cadmium, which have been mentioned in the hearings of your subcommittee as candidate materials to be classified as "extremely hazardous," are ubiquitous in nature. To say that they do not occur in any sample of any substance merely expresses the case that they have not been sought for in that substance with analytical tools of adequate sensitivity.

A second consideration is that, by permitting an administrative agency to set a "zero tolerance" on any contaminant, it is encouraged to bypass the often difficult but nevertheless essential step of identifying and justifying a real value based upon a rational consideration of the evidence. Even in the matter of ionizing radiation, for which the assumption of a linear extrapolation of dose-response relationships from measurable-effects down to zero-effects dosages has the widest acceptance, the validity of this technique is seriously disputed by many of the nation's most competent scientists. With respect to chemical toxicants, the "threshold" concept enjoys general acceptance. There is no consensus that dosages below the threshold level have any deleterious effect upon those so exposed.

A third consideration is the physical impossibility of operating any process with a zero emissions tolerance for any trace element. Even the most sophisticated laboratory equipment cannot reduce concentrations to zero, and for commercial equipment, best possible performance is still farther from that limit.

Since these elements are ubiquitous in all raw materials, a zero tolerance for any of them, if enforced, would shut down not only the processes designed to handle these toxic materials, but *all* industrial activity.

A fourth consideration is the dependance of nominal conformance to the standard upon factors unrelated to either the process or the alleged hazards from its emissions. "Zero," in practical terms, means "below the limits of detectability with available techniques." Thus a process or plant in nominal compliance today may constitute a violation tomorrow because someone, unrelated to either the plant or the enforcement agency, has developed a more sensitive or specific analytical tool.

Since "zero" cannot be measured, neither can it be enforced. The illogic of the entire zero tolerance concept is ably presented in the 1965 report of the National Research Council Committee on Pesticide Residues, a copy of which is attached.

We particularly invite your attention to recommendations 1 and 2 of this document, which read:

"(1) The concepts of 'no residue' and 'zero tolerance' as employed in the registration and regulation of pesticides are scientifically and administratively untenable and should be abandoned.

"(2) A pesticide should be registered on the basis of either 'negligible residue' or 'permissible residue' depending on whether its use results in the intake of a negligible or permissible fraction of the maximum acceptable daily intake as determined by appropriate safety studies."

These recommendations are as pertinent and valid with respect to air contaminants from socially useful industrial operations as they are to pesticide residues.

We urge that your Committee, as did the referenced National Research Council committee, reject the "zero tolerance" concept in its entirety, and direct the Secretary to base his control of those air contaminants that he deems extremely hazardous on a consideration of "negligible" or "permissible" limits justified on the basis of reasonably anticipated effects.

To that end we suggest that, on page 9, in line 13, "nature or amount" be amended to read "nature *and* amount" on the grounds that neither nature nor amount, *of itself*, provides an adequate basis for the setting of emission standards. An authority for the Secretary to set such standards solely on the basis of the nature of an emission, without regard to the quantity, invites the use of the "zero tolerance" concept that has been rejected in its entirety by the National Research Council committee.

Sincerely,

W. J. DRIVER.

NATIONAL AIR POLLUTION CONTROL ADMINISTRATION (NAPCA) FEDERAL MOTOR VEHICLE EMISSION GOALS FOR CO, HC, AND NO_x BASED ON DESIRED AIR QUALITY LEVELS

D. S. Barth, J. C. Romanovsky, E. A. Schuck, and N. P. Cernansky

FEDERAL REGULATIONS

BACKGROUND

[Note: Superior figures within text refer to references at end]

The Federal motor vehicle air pollution control program has its origin in the Clean Air Act, as amended in 1965.^(1,2) This Act borrowed heavily from the motor vehicle air pollution control program already in effect in California^(3,4) and reflected testimony from the automotive industry that similar controls were feasible for application nationwide. The automotive industry favored national standards to forestall a proliferation of regulatory legislation at the state level. National standards, applicable to the 1968 model year, were promulgated on March 31, 1966.⁽⁵⁾ More stringent and more equitable national standards, applicable to the 1970 model year, were promulgated on June 4, 1968.⁽⁶⁾ In addition, on February 10, 1970, Secretary Finch published an advance notice of proposed rulemaking indicating the Department's intent to adopt more stringent standards for the 1973 and 1975 model years.⁽⁷⁾

AIR QUALITY CRITERIA

Under the 1967 amendment to the Clean Air Act, ⁽⁸⁾ the Department of Health, Education, and Welfare is required to publish air quality criteria Documents. With criteria for photochemical oxidants, ⁽⁹⁾ carbon monoxide, ⁽¹⁰⁾ hydrocarbons, ⁽¹¹⁾ and nitrogen oxides either published or underway it now becomes possible to consider future motor vehicle emission standards in terms of desired air quality consistent with information in the pertinent air quality criteria documents. The resumes of these documents describe what in the Secretary's judgment are the concentrations and exposure time which cause or contribute to, or are likely to cause or contribute to, air pollution which endangers human health or welfare.

DESIRED AIR QUALITY GOALS

Based on the criteria resumes and observed aerometric relationships, Table I had been constructed to show the maximum values which would seem to be consistent with health-related criteria. Minimum safety margin considerations have been incorporated into these levels.

CALCULATING MOTOR VEHICLE EMISSION GOALS

Using the information in Table I, simple roll-back techniques, like those used by California, could be used to calculate needed emission reductions. These techniques, however, involve a number of assumptions which may not be entirely valid. For example, inherent in the techniques employed is the assumption that the increase in atmospheric concentrations of primary pollutants will be directly proportional to the growth in emissions of the contaminant. Also, the roll-back techniques employed by California assumed a linear correlation to exist between the severity of the manifestation, specifically oxidant index, and reactive hydrocarbon emissions to the atmosphere. The complexities of the photochemical alterations involving reactive hydrocarbons in the atmosphere are too great to permit such an assumption, *a priori*, because at a minimum the role of the oxides of nitrogen must be taken into consideration.

Clearly what is needed is to fully relate all these effects to emissions and to predict future events in growth and required control using a comprehensive simulation

model complete with modules reflecting all input variables, meteorological variables including air transport parameters, and importantly-where oxidants, eye irritants, and aerosols are concerned-the chemical kinetics describing the multiplicity of the reactions which occur. Factual data on existing air quality are also required in order to validate and adjust the model as necessary. Several studies are currently investigating the generation of these simulation models. (¹², ¹³) Unfortunately, none of these models is yet ready for general application.

RELATING AIR QUALITY GOALS FOR NITROGEN OXIDES AND NONMETHANE HYDROCARBONS TO OXIDANT GOALS

In the absence of a validated model which incorporates atmospheric chemical mechanisms, a more restricted diffusion model may be employed in which empirical relationships between primary atmospheric pollutants and secondary reaction products are known. Such relationships have been established between photochemical oxidants and nonmethane hydrocarbons.⁽¹¹⁾ Analogous relationships have also been developed for the oxides of nitrogen separately as well as in combination with nonmethane hydrocarbons. One important premise, based on experiences reflecting the cause and effects associations observed to relate Los Angeles with Pasadena, is that hydrocarbon emissions between the hours of 6 and 9 a.m. result in peak oxidant concentrations 2 to 4 hours later.⁽¹¹⁾ This is particularly true on the days of greatest interest-days which because of favorable meteorology favor maximum production of oxidant.

Figure 1 includes an analysis of 3 years of data which shows that on those several days a year when meteorological conditions were most conducive to the formation of photochemical oxidants, nonmethane hydrocarbon concentrations of 200 $\mu\text{g}/\text{m}^3$ (0.3 ppm C) for the 3-hour period from 6 to 9 a.m. might produce an average 1-hour photochemical oxidant peak concentration of up to 200 $\mu\text{g}/\text{m}^3$ (0.10 ppm) 2 to 4 hours later.⁽¹¹⁾ The hydrocarbon measurements were confined to 200 $\mu\text{g}/\text{m}^3$, or above, because of instrumentation limitations. However, if the functional relationships between the hydrocarbon and photochemical oxidant measurements were extended to include the levels presented in Table 4 as the highest value consistent with health-related criteria, the corresponding hydrocarbon concentration would be approximately 125 $\mu\text{g}/\text{m}^3$ (0.10 ppm C).

Figure 2 presents similar data relating 6 to 9 a.m. average nitrogen oxides concentrations to maximum daily 1-hour average oxidant concentrations appearing 2 to 4 hours later. The envelope enclosing the data presumably reflects those several days a year when meteorological conditions were most conducive to the formation of photochemical oxidants. On such occasions, if the functional relationships between the oxides of nitrogen and photochemical oxidant measurements were extended to include the level of oxidants presented in Table 1, the corresponding nitrogen oxides concentrations would be approximately 49 $\mu\text{g}/\text{m}^3$ as NO_2 (0.026 ppm).

Figure 3 is a three-dimensional presentation of the same data shown in Figures 1 and 2.⁽¹¹⁾ The isopleths traced through the different oxidant levels reflect the fact that the ratio of nonmethane hydrocarbon to nitrogen oxides is important, along with the absolute level of the separate independent variables, in determining the maximum level of oxidant produced on days of favorable meteorology. Presentation of the data in this form is useful for qualitatively considering the trade-offs between unilateral and joint control of hydrocarbons and oxides of nitrogen. It must be emphasized that Figure 3 at this time is based on relatively few points. Thus the curves can be better defined as further data become available. In view of this, the drawing of quantitative conclusions from this graph is not wholly justified.

Qualitative examination of Figure 3 shows that, depending on the specific existing concentrations of oxidants, nitrogen oxides, and nonmethane hydrocarbons, the optimum control strategy for the most rapid reduction of oxidants may be unilateral control of hydrocarbons, unilateral control of nitrogen oxides, or joint control of both nitrogen oxides and hydrocarbons. It must be pointed out, however, that all possible oxidant control strategy options are not available to us. Recall that the postulated health-related desired air quality for NO_2 is 190 $\mu\text{g}/\text{m}^3$ (0.10 ppm) for a 1-hour average (Table I). Thus no oxidant control strategy is acceptable which will not simultaneously lower the NO_2 values to the desired air quality. Furthermore, our estimate of available nitrogen oxides control technology is that there is at this time no proven or postulated device capable of lowering

nitrogen oxides emissions from internal combustion engine mobile sources sufficiently to achieve air quality concentrations of ≤ 0.026 ppm, which we have shown would be required to control oxidant air quality concentrations to $125 \mu\text{g}/\text{m}^3$ (0.06 ppm) by unilateral nitrogen oxides control.

We conclude that the most rational control strategy at this time is to control nitrogen oxides to achieve the desired health-related air quality for NO_2 and to rely on control of nonmethane hydrocarbons to achieve the desired oxidant air quality goal. Subsequent calculations will be based on this approach.

Again, caution must be exercised with respect to the permanency of the recommended control approach. In particular it must be kept in mind that all factors are not known relative to atmospheric interactions. Because of this lack of information it is most difficult to develop a comprehensive systems approach to this problem. A good example of the need for caution was discovered when the changes in the Los Angeles atmosphere between 1962 and 1967 were investigated.⁽¹⁴⁾ During this 5-year period, in the May through October months, the 6 to 9 a.m. hydrocarbons decreased by 4 percent and the nitrogen oxides increased by 25 percent. Additionally the maximum daily 1-hour average oxidant decreased by 11 percent. Focusing attention on only the decrease in maximum oxidant level, however, does not describe all the changes. Thus this maximum oxidant decrease was associated with an increase in the number of days on which the maximum oxidant exceeded 0.1 ppm. The result is that a trade-off has been made, i.e., an 11 percent decrease in the maximum for a 10 percent increase in dosage. This latter increase in dosage, and to a large extent the decrease in maximum, may be related to the altered ratio of HC to NO_x . Thus control approaches which suggest allowing increases in ambient levels of nitrogen oxides are definitely subject to question. As a result of this and other examples it is apparent that we must be always alert to the atmospheric situation on a year-to-year basis. Furthermore, we must be prepared to modify any adopted control approach as new information becomes available.

In addition to these examples of lack of information, there are other contributing factors which may demand changing any projected emission values at some time in the future. During the next five years, for example, we will re-examine the Photochemical Oxidant and Hydrocarbon Criteria documents. In the intervening years it is quite possible that more precise measuring methods may be developed. Thus the oxidant criteria may become ozone criteria and the present non-methane hydrocarbon measurement may be stated in terms of reactive hydrocarbons. Such changes will, of course, affect the emission goals as calculated in this presentation.

SUMMARY OF CALCULATIONS RELATIVE TO MOTOR VEHICLE EMISSION GOALS DESIGNED TO PRODUCE A HEALTH-RELATED ACCEPTABLE AIR QUALITY

Calculation of the motor vehicle emission goals for CO, HC, and NO_x requires application of two equations. The first of these equations permits a calculation of the fractional reduction in ambient concentrations necessary to achieve a specific health-related air quality.⁽¹⁵⁾ The equation is stated in terms of present air quality, desired air quality, background concentrations, and the projected growth in emissions. Mathematically stated, it has the form:

$$R = \frac{(GF) (PAQ) - (DAQ)}{(GF) (PAQ) - (B)} \quad (1)$$

where R is the calculated fractional reduction required; GF is the emission growth factor; PAQ is the present maximum air quality; DAQ is the desired air quality; and B is the background concentration. The second equation employs the result from Equation 1 to restate the air quality reduction in terms of mobile emission rates. Mathematically expressed, this second equation has the form:

$$(PER) (1-R) = DER \quad (2)$$

where PER is the percent emission rate giving rise to the present air quality (PAQ); the expression $1-R$ is the statement of how much of the emission can be allowed without exceeding the desired air quality. The multiplication, i.e., $(PER) (1-R)$ thus yields the desired emission rate (DER) consistent with the desired air quality (DAQ).

In order that the calculated emission goals be protective of health, certain principles must be adopted relative to the values inserted in Equations 1 and 2. Thus, present air quality in Equation 1 must be representative of the worst situation observed in the entire United States. For HC and NO_x values to be associated with health effects of oxidants and eye irritants, the worst situation presently occurs in Los Angeles. ⁽¹⁰⁾ (The 6 to 9 a.m. maximum average concentrations observed during the high oxidant potential season were 5.3 ppm for non-methane HC and 0.62 ppm for NO_x.) Los Angeles also had the highest yearly 1-hour average NO₂ concentrations (0.69 ppm); thus, when the health effects of NO₂ are being considered, air quality levels in Los Angeles are used. With respect to CO health effects, however, the city of Chicago, with a maximum 8-hour average of 44 ppm, represents the worst known case in the United States. ⁽¹⁶⁾ In terms of growth factors, we must again assume the maximum predicted growth in order to provide adequate health protection. For a time period from 1967 to ten years beyond the year of application of these motor vehicle emission goals, the maximum predicted growth factor for mobile emissions must be used. Again, to afford the maximum health protection, the background concentrations used in Equation 1 must be the maximum supported by scientific inquiry. For these purposes a value of 1 ppm was used for CO, ⁽¹⁰⁾ 0.1 ppm for HC, ⁽¹¹⁾ and 0.004 ppm for NO_x. The lowest supportable values for the desired air quality, as derived from the appropriate criteria documents, were used in Equation 1 and have been presented in Table I.

For the present emission rate (PER), we have related derived emission rates to a 1967 rate of 82.6 grams per miles (g/mi) for CO, 14.84 g/mi for HC, and 5.93 g/mi for NO_x. ⁽¹⁷⁾ The HC and NO_x rates are representative of the 1967 vehicle mix in Los Angeles, while the CO rate is representative of the 1967 vehicle mix in Chicago.

The one factor which this treatment does not speak to is the possible effect of the failure of vehicles to meet the stated emission goals when they become standards. Thus, surveillance data from vehicles presently in consumer use show current Federal standards are exceeded on the average by ⁽¹⁸⁾ percent in terms of CO emissions and 25 percent in terms of HC emissions. This, however, is a difficult factor to take into account because it may change in the future. If we ignore past failures, however, we are in essence announcing that before these emission goals are established as standards we will have devised methods that will force automobile manufacturers to provide control devices which will enable vehicles in consumer use to meet required emission standards. The projected emission limitations derived here will assume that devices and control systems in light duty vehicles in use continue to exceed the standards by the stated percentages.

To proceed to the calculation of specific mobile emission goals needed to achieve desired air quality goals, it now becomes necessary to designate a target year for implementation of the required mobile emission restrictions. Selection of a target year should be based upon the evaluation of many important factors such as: the need to meet the desired air quality goals at the earliest possible time; the state-of-the-art of control technology; and future advances in our understanding of atmospheric photochemical processes. It is beyond the scope of the paper and the competencies of the authors to evaluate all of the above factors and their interactions in detail. Thus, to avoid becoming embroiled in high-level policy questions which still remain to be resolved, we have arbitrarily selected 1980 as the target year on which to base our calculations. In the event the decision is made to select an earlier year for implementation it will be an easy matter to adjust the calculations accordingly. Of course, the earlier the calculated mobile emission restrictions can be put into effect, the earlier we will be able to achieve desired air quality goals and the less stringent will be the necessary mobile emission limits. In accordance with the above decision we used a 1967-1990 mobile emission growth factor. ^(17, 19)

In reviewing the required information items it will be noted that the percentage contribution of current mobile sources to existing air quality, the projected mobile growth rate, and the background concentrations of each pollutant are the least well-defined. Thus, background concentrations of HC are not delineated with any degree of accuracy. The same can be said about growth rates of mobile emissions. Furthermore, the percentage contribution of mobile emissions to total emissions must at this time be based on logic rather than known fact. In the case of Los Angeles there seems to be general agreement that in the downtown area

the smog-season emissions of CO, HC, and NO_x are mainly from mobile sources. Consequently, the calculated emission goals were based on the latter assumption. A similar assumption was made relative to the Chicago data, i.e., that the bulk of the ambient CO concentrations stem from the mobile source. If this assumption is incorrect, it follows that those stationary sources which contribute significantly to the downtown area concentrations of CO, HC, and NO_x must be controlled to the same degree as motor vehicles. To the extent that these sources are uncontrollable the restriction of the motor vehicle would have to be increased.

Table II contains a summary of the numerical values used in calculating 1980 mobile emission goals. Figures 4, 5, and 6 express the results of the calculations for desired mobile emission rates for CO, HC, and NO_x, respectively, as a function of the desired air quality for each pollutant without taking into account the potential deterioration of the control measures for CO and HC. In these figures a range of values above and below the Table I values of desired air quality are shown since the exact health-related values are still under study and may be changed in the future. Table III contains the 1980 motor vehicle emission goals for CO, NO_x, and HC required to achieve the desired air quality after taking presently observed CO and HC control measure deterioration into account.

III. SUMMARY

The historical background of the development of Federal mobile emissions standards has been presented. Based on issued and planned Criteria documents, desired air quality goals for health protection have been set at the following levels:

CO	≤ 10,000 μg/m ³ (9 ppm)—8-hour average.
Photochemical oxidants	≤ 125 μg/m ³ (0.06 ppm)—1-hour average
NO ₂	≤ 190 μg/m ³ (0.10 ppm)—1-hour average

The complexities inherent in the control of photochemical oxidants have been discussed and a control strategy involving joint control of hydrocarbons and nitrogen dioxides adopted. Using a modified roll-back calculation with a 1967 baseline, the following 1980 total motor vehicle emission goals by which to achieve desired air quality goals have been derived:

CO	6.16 g/mi
Hydrocarbons	0.14 g/mi
NO _x	0.40 g/mi

The calculation of future motor vehicle emission goals should be a continuous process with new data being used as they become available.

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TABLE I.—DESIRED AIR QUALITY GOALS FOR HEALTH PROTECTION (9-11)

Contaminant	Concentration, g.p.m. ³	Average, hours
Carbon monoxide.....	10,000 (9 p.p.m.).....	8
Photochemical oxidants.....	125 (0.06 p.p.m.).....	1
Nitrogen dioxide ¹	190 (0.10 p.p.m.).....	1

¹ Preliminary estimated value pending review of technical report on direct health effects of nitrogen dioxide and publication of Air Quality Criteria Document.

TABLE II.—Numerical values of parameters used in calculating mobile emission goals (9-11, 16, 17, 19)

Parameter	CO	HC	NO _x	NO ₂
1967 maximum air quality values related to direct health effects.	51 mg/m ³ for 8 hr., Chicago.			1300 µg/m ³ for 1 hr. (0.69 p.p.m.), Los Angeles.
1967 maximum air quality of oxidant precursors, (6 to 9 a.m. average).		3.5 mg/m ³ as CH ₄ (5.3 p.p.m. C), Los Angeles.	1170 µg/m ³ as NO ₂ (0.62 p.p.m.), Los Angeles.	
1967 average emission rates for all motor vehicles.	82.6 g/mi.....	14.84 g/mi.....	5.93 g/mi.....	
Maximum background concentration.	1 mg/m ³ (1 p.p.m.).	0.1 mg/m ³ as CH ₄ (0.1 p.p.m.).	8 µg/m ³ as NO ₂ (0.004 p.p.m.).	8 µg/m ³ as NO ₂ (0.004 p.p.m.).
Maximum growth factor of mobile emissions.	2.18.....	2.18.....	2.18.....	2.18.
Air quality goals.....	10 mg/m ³ for 8 hr. (9 p.p.m.).	125 µg/m ³ of oxidant (0.06 p.p.m.), 1-hr. average.	125 µg/m ³ of oxidant (0.06 p.p.m.), 1-hr. average.	190 µg/m ³ for 1 hr. (0.1 p.p.m.).

TABLE III.—*Relationship of Air Quality Goals to Motor Vehicle Emission Goals*

Emission	Type of effect	Health-related air quality goals	Health-related averaging time (hours)	Emission goals from all vehicles to achieve desired air quality (g/mi)	Control requirement for all vehicles (percent)
Carbon monoxide.....	Direct.....	10 mg/m ³ (9 p.p.m.).....	8	6.16	92.5
Nitrogen oxides ¹ (NO ₂).....	Direct (NO ₂)..	190 µg/m ³ (0.1 p.p.m.) (NO ₂)..	1	.38	93.6
Hydrocarbons.....	Indirect.....	125 µg/m ³ of oxidant (0.06 p.p.m.).	1	.15	99.0

¹ The NO_x emission goal is identical to the NO₂ emission goal since in Los Angeles, the city at maximum risk, all NO is converted to NO₂.

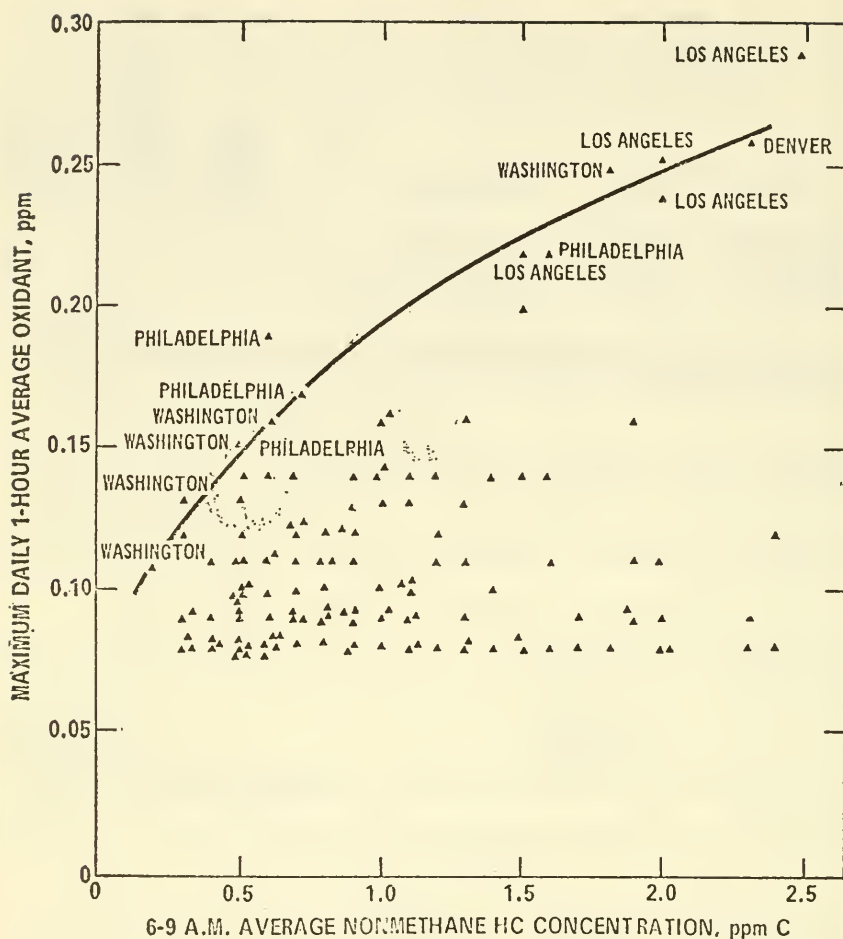


Figure 1. Maximum daily oxidant as a function of early morning non-methane hydrocarbons; 1966-1968 CAMP stations; May through October 1967 for Los Angeles.¹¹

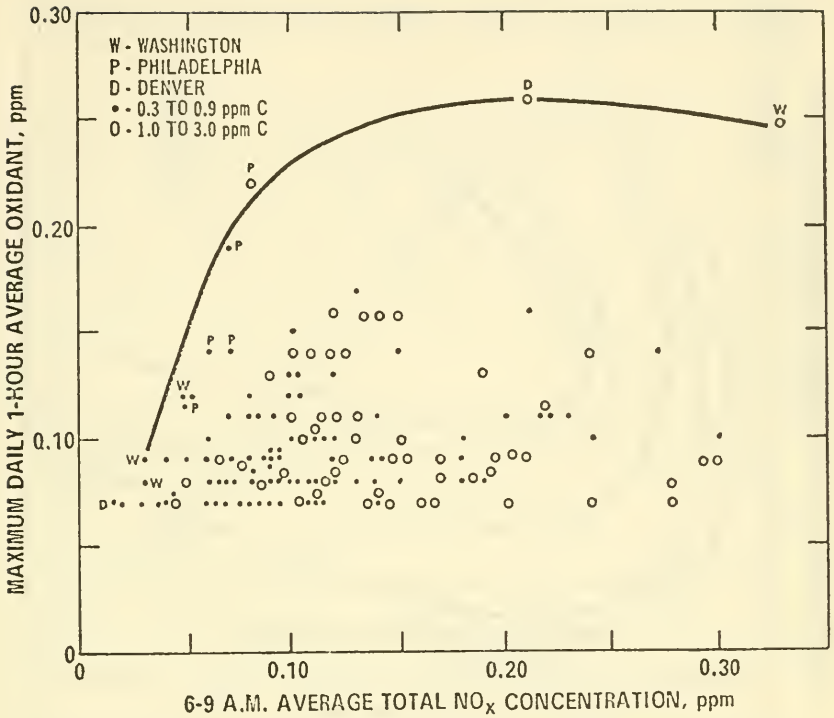


Figure 2. Maximum daily oxidant as a function of early morning nitrogen oxides; 1966-1968 CAMP stations.

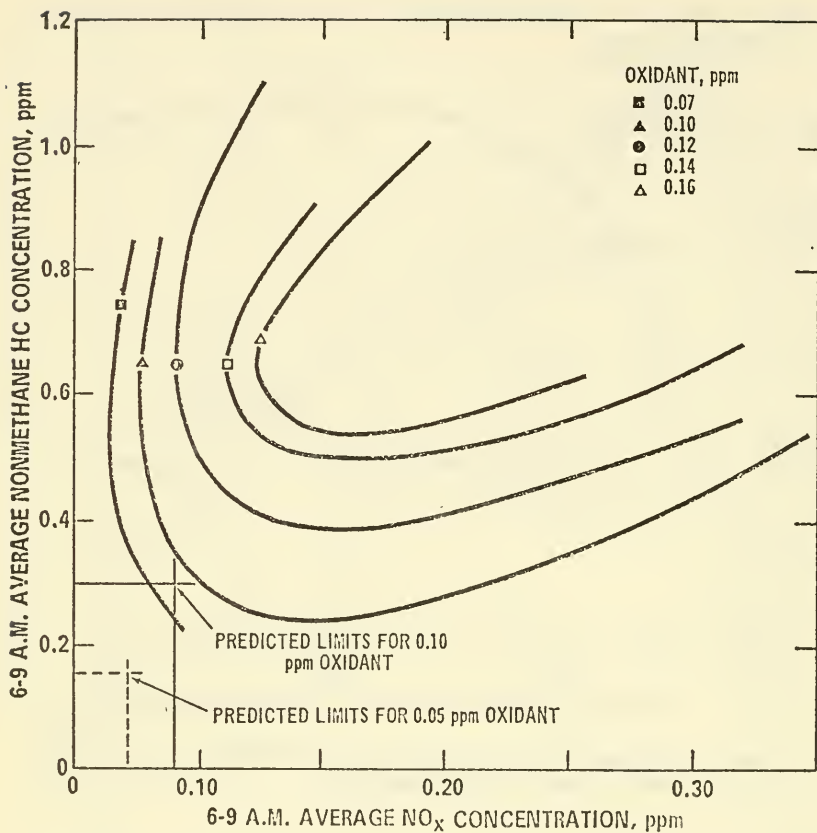


Figure 3. Upper limit on maximum daily-1-hour average oxidant as a function of early morning nonmethane hydrocarbons and nitrogen oxides; June, July, August; Philadelphia, Washington, Denver; 1966 through 1968.¹¹

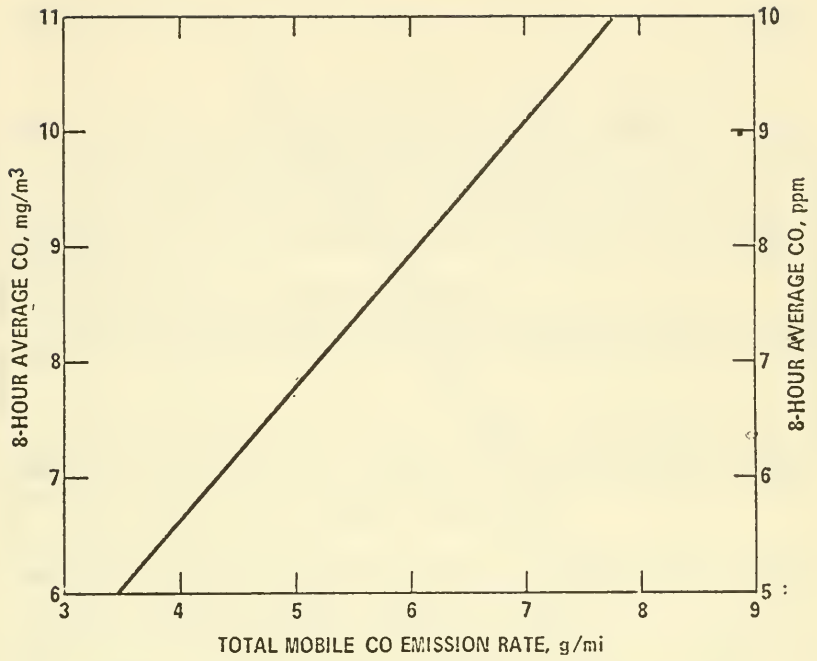


Figure 4. Relationship of 8-hour average CO values to mobile emission rates.

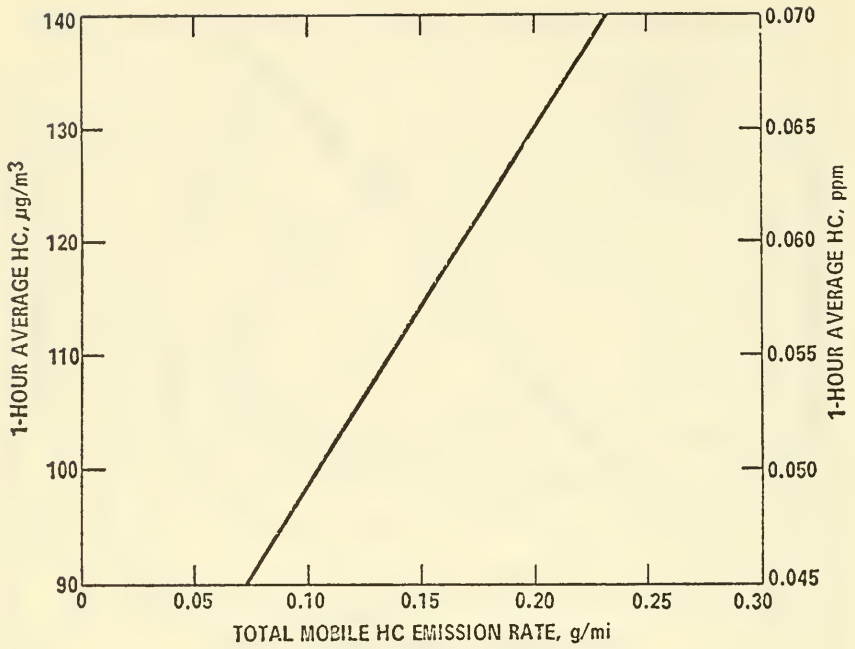


Figure 5. Relationship of HC mobile emission rate to 1-hour average oxidant.

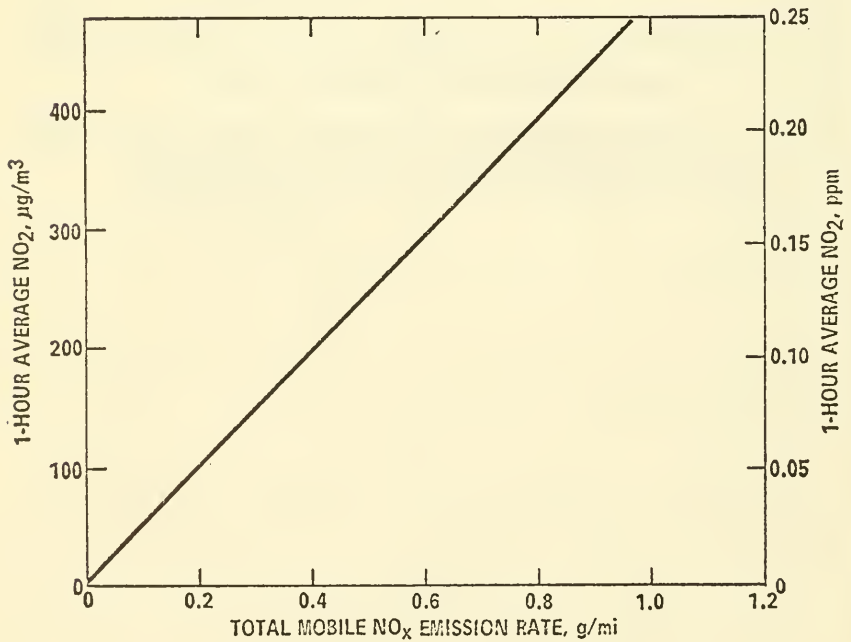


Figure 6. Relationship of 1-hour ambient NO_2 levels to mobile NO_x emission rates.

NATIONAL ASSOCIATION OF ELECTRIC COMPANIES

NO. 1.—AMENDMENT TO SENATE COMMITTEE ON PUBLIC WORKS' PRINT NUMBER 1, AUGUST 25, 1970 OF THE NATIONAL AIR QUALITY STANDARDS ACT OF 1970

On page 3, line 14, insert at the beginning of Subsection (B) the following:

"Subject to the paramount authority of a State public utility or service commission,"

so that the Subsection (B) would read as follows:

"Subject to the paramount authority of a State public utility or service commission, such State agency has adequate authority to abate and control air pollution from all sources in the area served by such regional program;"

EXPLANATION

To qualify for financial assistance the state must have an agency with the adequate authority to abate air pollution. In some states the Public Utilities Commission exercises pre-emptive jurisdiction over the construction of generating facilities. This jurisdiction would be defeated by the proposed Section 105(a)(4)(B). This is corrected by the suggested amendment.

NO. 2.—AMENDMENT TO SENATE COMMITTEE ON PUBLIC WORKS' PRINT NUMBER 1, AUGUST 25, 1970 OF THE NATIONAL AIR QUALITY STANDARDS ACT OF 1970

On page 9, line 12, after the word "agencies" insert the words "and state and local agencies".

On page 10, line 13, after the word "agencies" insert the words "and state and local agencies".

EXPLANATION

In developing air quality criteria and control techniques the Secretary should consult with state and local agencies.

NO. 3.—AMENDMENT TO SENATE COMMITTEE ON PUBLIC WORKS' PRINT NUMBER 1, AUGUST 25, 1970 OF THE NATIONAL AIR QUALITY STANDARDS ACT OF 1970

On page 10, line 18, following the word "and" insert the words "economic feasibility of".

On page 10, line 19, following the word "pollution" insert the words "including cost-effectiveness analysis."

EXPLANATION

This amendment conforms to language in the Air Quality Act of 1967.

NO. 4.—AMENDMENT TO SENATE COMMITTEE ON PUBLIC WORKS' PRINT NUMBER 1, AUGUST 25, 1970 OF THE NATIONAL AIR QUALITY STANDARDS ACT OF 1970

On page 14, line 9 and 10, strike the words "including, but not limited to, land-use and air and surface transportation controls and permits" and insert in lieu thereof the following words: "giving balanced consideration to the public interest in the products or activities of the source".

EXPLANATION

This amendment is suggested to provide in Section 111 a recognition of the need sometimes to balance questions of the broad public interest in the products or activities of the source of air pollution agents with the requirement to improve air quality.

NO. 5—AMENDMENT TO SENATE COMMITTEE ON PUBLIC WORKS' PRINT NUMBER 1
AUGUST 25, 1970 OF THE NATIONAL AIR QUALITY STANDARDS ACT OF 1970

On page 16 strike all of Subsection (K) found on lines 5, 6, 7, and 8.

EXPLANATION

Section 111(a)(1) requires each state to hold public hearings before adopting implementation plans. Section 112 allows a state to adopt standards and plans more stringent than those established by the Secretary. *It seems unnecessary and unreasonable to require a state to hold public hearings on the adoption of ambient air quality standards more restrictive than the national standards before receiving approval of its implementation plans.*

NO. 6—AMENDMENT TO SENATE COMMITTEE ON PUBLIC WORKS' PRINT NUMBER 1,
AUGUST 25, 1970 OF THE NATIONAL AIR QUALITY STANDARDS ACT OF 1970

On page 18, beginning of line 17, strike "or States and," and substitute in lieu thereof "or States of these new factors and shall allow the appropriate State or States an opportunity to respond,".

On line 17 and 18 delete the words "revises such plan" and substitute "responds".

On line 19 strike "revision" and substitute "response" and strike "shall" and substitute "may".

EXPLANATION

Section 111(d)(1) requires the Secretary to notify the appropriate State or States of new information which has come to his attention that the implementation plan will be or has been inadequate to achieve national ambient air quality standards. The State or States are required to revise such plan within 90 days without any opportunity to respond to the Secretary's notification. This suggested amendment will provide the appropriate State or States an opportunity to explain or to discuss the new information received by the Secretary from their point of view and to respond within 90 days. The Secretary then is given the option of requiring a change in the implementation plan if he deems it necessary.

NO. 7.—AMENDMENT TO SENATE COMMITTEE ON PUBLIC WORKS' PRINT NUMBER 1,
AUGUST 25, 1970 OF THE NATIONAL AIR QUALITY STANDARDS ACT OF 1970

On page 23, line 24, after the word "of" strike "the latest".

On page 24, line 1, strike the words "available control technology" and insert in lieu thereof the word "controls".

On page 24, line 2, after the word "alternatives" insert the following: "that have proven technological feasibility and reliability".

On page 30, line 15, insert after the word "control" the following: "achievable through techniques having proven technological feasibility and reliability."

EXPLANATION

In this rapidly changing field it is possible for a supplier to present to the Secretary certain concepts and schemes of control technology when in fact these concepts have not been proven. For that reason we suggest that any controls, processes, operating methods or other operating alternatives have proven technological feasibility and reliability before the Secretary will be required to consider them in the promulgation of his regulations.

NATIONAL STEEL CORP.

AUGUST 24, 1970.

HON. JENNINGS RANDOLPH,
Chairman, Senate Public Works Committee,
Washington, D.C.

Dear SENATOR RANDOLPH: In March of 1970, I represented a major segment of the steel industry before the Senate Subcommittee on Air and Water Pollution on air pollution legislation being considered at that time by the committee. On August 19, 1970 the subcommittee reported to the full committee an entirely new bill known as the National Air Quality Standards Act of 1970 which was so drastically revised that a number of items in the bill were never considered during the committee's formal hearings. In the brief time since August 19, certain representatives of our industry have studied the new bill and present the following comments for your consideration.

SECTION 113 NEW SOURCE STANDARDS OF PERFORMANCE

As I stated at the hearing, we are quite concerned about Section 113 titled, "New Source Standards of Performance". By this section, the Secretary will be required to certify and approve for construction all new potential sources of air pollution throughout the United States. Standards of control and certification of new sources are certainly a good approach to air pollution control and such a policy has been embraced for several years by many of the States and local air pollution control agencies throughout the United States. West Virginia, Kentucky and many others already have such authority. Section 113, however, authorizes the Secretary to either preempt or duplicate this existing authority. The Secretary shall first publish a list of categories of new sources and then within 120 days establish Federal performance standards for these new sources. These standards shall be based on "the greatest degree of emission control which the Secretary determines to be achievable through application of the latest available control technology, processes, operating methods, or other alternatives." *There is no consideration whatsoever for ambient air quality or economics.* We do not believe that the secretary or his staff has the expertise to determine "greatest degree of emission control" possible for the many air pollution sources that are constructed annually throughout the United States. If such standards are to be set on a National basis, the secretary should be required to consult with the Pollution Control Techniques Advisory Committees established in public law 90-148, section 107(c). A number of these committees have already been established and have prepared control technique documents which list the latest control technology and costs of installation and operation for specific industrial sources. *These committees of experts should be consulted prior to establishment of performance standards under section 113 and certification of these sources should be the responsibility of State and local control agencies.*

Section 113 states that the Secretary *may* delegate certification authority to the States following a determination by the secretary that the State's procedure for certification is acceptable. To avoid unnecessary delays to industrial construction, which most certainly will occur if the Secretary has to approve the thousands of applications that this section will initiate, we believe the word *may* in the proposed legislation should be replaced by the word *shall* so that this certification responsibility can be handled by the States and local agencies where it can be done more expeditiously. We recommend that the Committee consider the following language to be inserted at the end of Section 113(c)(1) page 23, line 23: *In those States where the Secretary retains certification authority, he shall take action with respect to any new source certification application within 30 days after receipt by the Secretary.* Also in this section as in other sections of the bill, we are concerned about the excessive amount of record keeping, monitoring, and reporting that will be required by industry. Much of this is already done by State and local agencies and does not need to be duplicated by the Federal government.

SECTION 114 NATIONAL EMISSION STANDARDS—SELECTED AIR POLLUTION AGENTS

Section 114 authorizes the Secretary to draft appropriate emission standards for selected air pollution agents "which has or may be expected to have an adverse effect on health and welfare." We believe these guidelines to be unrealistic. Regardless of the selected air pollution agents to be listed by the Secretary, it is virtually impossible to write a national emission standard which would guarantee protection of health and welfare. First, the Secretary will publish ambient air quality standards for the protection of health and air quality goals for the protection of health and welfare. Emission standards to meet these ambient air quality standards cannot be realistically adopted on a national basis. These emission standards should be regional in nature and drafted by the State and local regional authorities to assure that the emission standards accommodate the environment in that particular region. It is one thing to write national ambient air quality standards but quite a different matter to write national emission standards to accomplish this air quality, a point which I discussed in detail in my statement before this subcommittee in March of this year.

We recommend that all emission standards be drafted by State and local governments and made a part of the respective implementation plans to be submitted by the States to the Secretary for approval. The Secretary should, as defined in public law 90-148, supply pollution control technique documents to the States to assist them in development of technologically feasible emission standards.

The balance of Section 114 need not be changed with the possible exception of Section 114(i)1, which reads as follows: "Each state may within 180 days after promulgation of any emission standard pursuant to this section develop and submit to the Secretary a procedure for enforcement of any such emission standards for any stationary source located in such State. If the Secretary finds the State procedure is adequate to implement the purposes of this section, he *may* delegate enforcement authority provided in this section to such State." Under our proposal, the emission standards would be as defined in the State's plan of implementation for the selected air pollution agents to be listed by the Secretary. We recommend that the word *may* underlined above be changed to *shall* so that enforcement control can be assured of remaining with those States which demonstrate enforcement competence.

SECTION 115 NATIONAL EMISSION STANDARDS—HAZARDOUS AIR POLLUTION AGENTS

Although agents classified as "hazardous" have limited use by the steel industry, we would like to make some comment on this section. Section 115(a)(2) states that the Secretary "*shall publish a proposed prohibition of emissions of each such agent or combination of agents from any stationary source . . .*" *In air pollution control we know of no agent which requires an emission standard of zero.* Although relief from a total prohibition is provided in subsequent paragraphs of Section 115, we feel it is unwise for the Congress to even suggest a zero emission standard for anything. We believe the language of Section 115(a)(2) should simply authorize the Secretary to *set emission standards for hazardous agents following consultation with the appropriate Technical Advisory Committees.*

SECTION 117 FEDERAL ENFORCEMENT

The type of control envisioned by this new legislation will place all of us on the outer edge of technological feasibility. For that reason we feel it is unwise in Section 117(a)(2) to limit the time for correcting violations to 72 hours. When designing to the limit of technological feasibility it is quite easy to overestimate the effectiveness of a particular piece of equipment. For this reason, although an industry may agree to meet a certain standard with a new piece of control equipment, they may find after start-up of that equipment that it is deficient. Failure to meet the emission standard would not be bad faith on the part of the company involved and certainly cannot be corrected in the 72 hours required by the proposed legislation. There should be sufficient latitude in the legislative language to permit the Secretary to agree to a variance to give the affected industry time to either modify the equipment involved or demonstrate that the emission standard required goes beyond technological feasibility. Such a variance should be at the discretion of the Secretary and not require the industry to immediately apply to the courts for relief.

Section 117(b) states without qualification that "any person (A) who knowingly violates any schedule or timetable of compliance or emission requirement included in any implementation plan . . ." "shall, upon conviction, be punished by a fine of not more than \$25,000 per day of violation, or by imprisonment for not more than one year or by both." The language of this section does not give the Secretary any choice but to take these violations directly to court. If there are legitimate reasons for delay such as a labor stoppage or late deliveries of equipment, the Secretary should have the authority to provide extensions to the implementation plans. It may be that there is language in the legislation that gives the Secretary this authority, but even so, we believe that this should be spelled out in this section.

We therefore propose that Section 117(a)(2) be revised to read as follows:

"Whenever, on the basis of surveys, studies, investigations, reports or any information otherwise made available to him, the Secretary or an authorized representative of the Secretary finds (A) that any person is in *a significant or deliberate* violation of, or is causing or contributing to a violation of, an implementation plan, including any emission requirement therein, and that, in the judgment of the Secretary, a State has not satisfactorily administered its implementation plan, particularly the requirements of section 111(a)(2)(G); or (B) that any person is in *a significant or deliberate* violation or is causing or contributing to a violation of standards of performance established under section 113 of this Act; or (C) that any person is in *a significant* violation of an emission standard established under section 114 of this Act; he shall promptly issue an order in writing to such person requiring such person to abate such violation as soon as possible and within a *reasonable* time to be prescribed therein. [In the case of a violation of any emission requirement, emission standard, or standard of performance, such time shall not exceed seventy-two hours.]

Note: *Underscore* portion added; bracketed portion deleted.

SECTION 306 FEDERAL PROCUREMENT

Penalties already prescribed in previous sections of this Act are severe and will prove an effective deterrent to anyone inclined to violate its provisions. It seems unduly severe to further penalize offenders by disqualifying them for a 12 month period in their legitimate conduct of business with the Federal government. Section 306(a) states that "any person (2) convicted by a Federal court for a knowing violation of any applicable schedule or timetable of compliance, emission requirement, prohibition, emission standard, or standard of performance, *shall be ineligible to enter into any contract with any Federal agency for the procurement of goods, materials, and services . . . Such ineligibility shall continue . . . for a period of one year . . .*" This additional penalty provision should not be included in the Act. We recommend complete elimination of Section 306 from the Act.

I appreciate the opportunity to make these comments on the proposed National Air Quality Standards Act of 1970 and wish the Committee every success in its legislative efforts to provide a progressive and effective air quality act.

FRED E. TUCKER,
Vice President, Environmental Control, National Steel Corp.

HON. GAYLORD NELSON, A U.S. SENATOR FROM THE STATE OF
WISCONSIN

U.S. SENATE,
COMMITTEE ON LABOR AND PUBLIC WELFARE,
Washington, D.C., September 11, 1970.

Hon. JENNINGS RANDOLPH,
Chairman, Senate Public Works Committee,
U.S. Senate, Washington, D.C.

DEAR JENNINGS: You are no doubt aware of the 1970 Clean Air Car Race from Cambridge, Massachusetts to Pasadena, California during the last days of August. This is the second such event in which several hundred students from universities throughout the U.S. and Canada have made a great contribution of time and money to assist in resolving the major air pollution problem of today—contaminant emissions which result from the large population of autos powered by internal combustion engines and fueled by gasoline.

The 1970 Collegiate Clean Air Car Race was just concluded. The dramatic test results of that race have not yet been made public, but the auto industry knows the results and are deeply embarrassed by them.

Based upon a formula which took into account both performance characteristics as well as emissions control, the overall winner of the 1970 Clean Air Car Race was the entry from Wayne State University in Detroit, Michigan. What the giants of the automobile industry are claiming cannot be done, was demonstrated to the American public by a team of night students at Wayne State who are employed as technicians by Ford Motor Co. during the day. Without the financial or technical resources available to the auto industry, these students equipped a 1971 Ford Capri powered by a 302 cubic inch V8 engine with four platinum catalytic mufflers, an exhaust gas recirculation system, electric fuel pump, insulated fuel lines, and a temperature sensing carburetor and raced across the United States.

When the Wayne State University entry reached California it was tested for pollution control. The results after this 3,600 mile race showed that the student-modified internal combustion engine using non-leaded gasoline surpassed not only the proposed 1975 Federal Standards, but were far below the proposed 1980 Federal Standards which your subcommittee has recommended be advanced for 1975.

Emissions from the student-modified Ford Capri at the end of the race were .19 grams per mile of carbon monoxide, 1.48 grams per mile of hydrocarbons, and .29 grams per mile of oxides of nitrogen. The proposed 1980 Federal Standards, advanced to 1975 in the legislation before the committee, would set a limit of .25 grams per mile of carbon monoxide, 4.7 grams per mile of hydrocarbons, and .45 grams per mile of oxides of nitrogen. The significance of these dramatic results perhaps can best be understood when compared with the emissions of the uncontrolled internal combustion engine of a few years ago which spewed 73.0 grams per mile of carbon monoxide, 11.2 grams per mile of hydrocarbons, and 4.0 grams per mile of oxides of nitrogen into the air.

The results of this student-initiated clean car race appear to me to be particularly significant to members of the Senate Public Works Committee and others who have an immediate interest in eliminating automobile emissions as the major source of air pollution and the largest single contributor to damages arising from contaminated air. This subject is currently the subject of heated debate and I am sure that you are well aware of the statements of the automobile industry which questions the possibility of controlling automobile air pollution in the next five years.

The 1970 Clean Air Car Race was a student-organized 3,600-mile transcontinental test of cars developed to meet both safety and performance requirements while reducing air pollution emissions to a minimum. Vehicles were to be entered and driven only by students, who were to do their own roadside repairs. Vehicles applying for entry included those powered by steam, electric batteries, liquefied natural gas, compressed natural gas, liquid petroleum gas, electric-hybrid combinations, gasolines.

To qualify to enter the race, the vehicles were required to have the potential for meeting the Federal air pollution emission standards which are proposed by the National Air Pollution Control Administration for 1954 cars. In actual competition, the cars were to be judged on such points as student participation in developing the vehicle with its control equipment, degree of innovation, car performance, thermal efficiency, maintenance of speed, practicality, cost, safety mass production capability, and degree of contribution to resolving the air pollution to resolving the air pollution problem.

Check points were established from Boston to Los Angeles which represented mileage to be covered safely and reasonably for each day of a six-day driving period. Emissions tests were performed by qualified government or contract laboratories at Cambridge, Massachusetts, Ypsilanti, Michigan, and Los Angeles so that possible deterioration in performance could be evaluated.

Thirty-five cars finished the race. Nine of these vehicles did in fact meet the proposed 1975 U.S. emission standards. What is perhaps more significant is that two of these nine cars met the proposed U.S. emission standards for 1980, a goal which the auto manufacturers have contended to this committee that they cannot meet in 1975!

Of the nine which met or bettered the proposed 1975 emission standards six were powered by standard internal combustion engines using compressed (CNG), or liquefied natural gas (LNG), or liquefied petroleum gas (LPG).

The remaining three also utilized the standard internal combustion engine, but were fueled by alcohol, LNG combined with hydrogen, and, in the case of the one adjudged the overall winner, unleaded gasoline.

The latter car, the winner of the race, met the proposed U.S. 1980 emission standards for all contaminants and deserves particular consideration for it utilized an internal combustion engine and unleaded gasoline.

It is a 1971 Ford Capri powered by a 302 cubic inch V8 engine supplied by Ford. It was entered and driven by four night students of Wayne State University at Detroit—Alden Raquepau, John S. Karol, Bryan Geraghty, and Mike Riley. The last two young men are employed as technicians in branches of the Ford Motor Co. They equipped the car with two platinum catalytic mufflers for control of hydrocarbons and carbon monoxide and two additional for control of oxides of nitrogen. They also equipped the vehicle with an exhaust gas recirculation system, electric fuel pump, insulated fuel lines, and a temperature sensing carburetor. As previously noted, the vehicle was operated exclusively on non-leaded gasoline.

The test results obtained at Cambridge and Los Angeles on the declared winner as compared to the proposed Federal emission standards for 1975 and 1980 are as follows:

Pollutant	Cambridge test (hot start)	Ypsilanti test (cold start)	Los Angeles test		Proposed Federal standards ¹ (gr./mi.)	
			Hot start	Cold start (gr./mi.)	1975	1980
Carbon monoxide.....	1 percent.....	(?).....	1 percent.....	1.48	11.0	4.7
Hydrocarbons.....	10 p.p.m.....	(?).....	16 p.p.m.....	.19	.5	.25
Oxides of nitrogen.....	100 p.p.m.....	(?).....	118 p.p.m.....	.29	.9	.45

¹ Proposed Federal standards based on cold start.

² The Ypsilanti tests were ignored because of excusable fault.

The above results demonstrate the fact that a 1971 Ford internal combustion engine can meet the proposed 1980 standards today. They also show that deterioration in vehicle emissions performance between Cambridge and Los Angeles was negligible. This evidence supports those provisions of the legislation proposed by your Subcommittee on Air and Water Pollution which would require compliance with the proposed 1980 Federal emissions standards by 1975.

One can also conclude that the accomplishment of the Wayne State University students with a minimum of experience with a major manufacturer should be well within the expertise of all segments of the entire automobile industry.

However, I do not wish to arrive at this conclusion on the basis of one vehicle with one type of control operated by one team of students.

As I mentioned earlier, another entrant met the proposed 1980 standards. It was one of the six entrants in the race powered by internal combustion engines fueled by compressed or liquefied natural gas or liquefied petroleum gas.

The 1970 American Motors Hornet entered by students of the California Institute of Technology was operated entirely on compressed natural gas and was equipped with one catalytic muffler as against the four installed on the Capri. Its test data is as follows:

Pollutant	Cambridge test (hot start)	Ypsilanti test (cold start)	Los Angeles test (hot start)	Proposed Federal standards	
				1975	1980
Carbon monoxide.....	1 percent.....	1.0 gr./mi.....	1 percent.....	11.0 gr./mi.....	4.7 gr./mi.
Hydrocarbons.....	11 p.p.m.....	.21 gr./mi. ¹	26 p.p.m.....	.5 gr./mi.....	.25 gr./mi.
Oxides of nitrogen.....	128 p.p.m.....	.47 gr./mi.....	100 p.p.m.....	.9 gr./mi.....	.45 gr./mi.

¹ With .50 correction for nonreactive hydrocarbons which is allowed by State of California procedures and pending in Federal procedures. Hydrocarbon emission from vehicles using natural gas are largely methane which does not react in the atmosphere.

This vehicle, along with the other five operating on CNG, LNG, or LPG was placed in the same category as those with an internal combustion engine using gasoline because they shared the same basic power plant. Therefore, these vehicles did not place well in the final judging because of the official ruling on the accessibility of fuel. While natural gas is available in one form or another to the majority of stationary fuels users throughout the country, it is not yet possible for a motorist to drive into service stations and have his fuel cylinders filled with this fuel and the individual vehicle owner does not have low-cost compression equipment for home use.

However, present day vehicles powered by internal combustion engines fueled with natural gas or LPG have a great potential for fleet operations in major urban areas. Fleet operators capable of providing their own gas refueling facilities can take advantage of this low-cost clean fuel and its attendant low-cost operation and maintenance factors. Both the General Services Administration and the Post Office Department are presently evaluating the desirability of utilizing this fuel in their large fleets.

Before concluding my discussion of individual entrants in the race, I would like to inject a note of local pride. Students of the University of Wisconsin qualified to enter two of the 43 vehicles which started the race. They were both powered by standard internal combustion engines, one fueled with LNG and the other with unleaded gasoline. They both performed very well. The vehicle powered by LNG met the 1980 standards for all contaminants except oxides of nitrogen.

In summation, it is apparent that the fuels used are as important to air pollution control as the power plants used in motor vehicles at the present time. The Clean Air Car Race demonstrates that an internal combustion engine can meet the proposed 1980 emission standards—with unleaded gasoline and maximum catalytic control, or with natural gas.

While steam powered vehicles did not finish the race and electric powered vehicles had difficulty meeting the speed requirements between check points, they cannot be ignored as having real potential over the long term. Both electricity and steam have been ignored for too long a period of time as a method for motor vehicle propulsion for the gap to be closed in a few short years.

The Clean Air Car Race of 1970 must be considered as an important contribution to the continuing effort to provide environmental quality for this nation. The initiative and efforts of several hundred students from campuses throughout the country have made a dramatic demonstration that automobile air pollution can be controlled and is a practical goal for 1975. This is certainly a constructive and responsible contribution of our youth that has been made for all our citizens.

Sincerely yours,

GAYLORD NELSON, *U.S. Senator.*

COMPARISON OF EMISSION STANDARDS

[In grams per mile]

	Hydrocarbons	Carbon monoxide	Oxides of nitrogen
Uncontrolled internal combustion engine.....	11.2	73.0	4.0
1970 Federal standards.....	2.2	23.0	None
(Actual achieved control).....	(4.6)	(47.0)	* 1
Projected Federal Standards for 1975 under Senate Clean Air Act proposed for 1980 by NAPCA.....	.25	4.7	.4
Alternate powerplants and fuels:			
Steam car ²	.2	1.0	.4
Gas turbine ³	.32	3.5	1.9
Natural gas fueled ICE ⁴	.21	1.0	.47
Organic Rankine-cycle reciprocating ⁵	.05	.35	.38
Modified ICE with unleaded gas ⁶	.19	1.48	.29

¹ The control of hydrocarbons and carbon monoxide for 1970 Federal standards has increased the emissions of oxides of nitrogen over the level of the uncontrolled internal combustion engine (4 grams per mile).

² Based upon the Williams Bros. steamcar tested by Mobil Oil Corp. in December 1966.

³ Based upon Chrysler Corp. experimental gas turbine car.

⁴ Based upon Cal Tech compressed natural gas ICE in "1970 Clean Air Race."

⁵ Based upon projections from smaller scale burner tests of Thermo Electron Corp. engine.

⁶ Based upon 1971 modified Ford Capri—overall winner in "1970 Clean Air Car Race" entered by Wayne State University.

STANDARD OIL COMPANY OF INDIANA

STANDARD OIL Co., INDIANA,
Washington, D.C., August 28, 1970.

Hon. EDMUND S. MUSKIE,
U. S. Senate,
Washington, D.C.

Dear SENATOR MUSKIE: We have today filed with Senator Randolph a letter suggesting certain changes which we feel would be desirable in the bill to amend the "National Air Quality Standards Act of 1970" which is currently before your Committee.

A copy of this letter is attached for your information, and I hope that you will be able to support our views regarding the changes suggested in this bill.

Sincerely yours,

WILLIAM W. SPEAR.

STANDARD OIL Co.,
Chicago, Ill., August 27, 1970.

Hon. JENNINGS RANDOLPH,
Chairman Committee on Public Works,
Washington, D.C.

Dear MR. CHAIRMAN: I appreciate this opportunity to express our concern over some of the provisions of the proposed National Air Quality Standards Act of 1970 now under consideration by your Committee.

Our company is firmly committed to the policy of taking all steps necessary to improving the quality of the environment. While we feel that the intended purpose of this proposed legislation is to achieve that same goal, we believe that some of its provisions are physically impossible of accomplishment. Legislation that is unrealistic can only bring the credibility of the entire pollution control program into question. The following changes should be made to the bill in order to correct these deficiencies:

1. The proposed new Sec. 202(e) would require for model year 1975 vehicles a ninety percent reduction from all emissions for 1970 model year vehicles. The entire approach of the Clean Air Act and the balance of this proposed amendment is to place on the Secretary the responsibility of determining the emission levels necessary to protect the public health and welfare and then to establish regulations to see that these criteria are met. This section, however, effectively writes into law numerical levels for emissions from motor vehicles. Even the language of the preceding sections recognizes that such a requirement is an exception to the normal legislative approach to such emission standards.

Regulations now in force, under the statutory procedures available to and used by the Secretary, will have the effect of reducing the total burden automotive emissions by over 85% between 1970 and 1985 even allowing for a 50% increase in car population. To legislate today a target that would provide over 94% reduction may have a certain appeal, but since it requires emission levels that are unattainable by any known technology for either the present gasoline engine, the turbine or the steam engine, it is hardly realistic. If further reductions are shown to be needed for protection of health and welfare and technical feasibility is in sight, they should then be accomplished through regulation.

2. The proposed new Sec. 212 would authorize the Secretary to regulate the components of any fuel. This provision would initiate the use of method standards as a substitute for performance standards in the federal air pollution control program. There certainly has been no evidence that this proposal is necessary. The experience of the past few years has shown that once realistic and desired emission control goals are promulgated, the industries affected will apply their research and technical resources to achieve these goals. A prime example of how this system works is the recent action of the petroleum industry to manufacture and market lead-free gasoline so that future emission standards can be attained. Such experi-

ence has shown that there is no need for this additional authority. On the contrary, imposition of such government controls may well inhibit industry's ability to develop the most effective approach to pollution abatement. It would stifle innovative approaches and reduce competition. Therefore, proposed Sec. 212 should be stricken and the present Sec. 210 of the Act providing for registration of fuel additives should be left intact.

It should further be noted that the language of proposed Sec. 212 is broad enough to authorize the Secretary to regulate the components of any fuel in any form used for any purpose. For example, the Secretary could regulate the sulphur content of coal or fuel oil used for space heating or power generation. We doubt that the Committee intends this section to have such extensive coverage.

3. The proposed new Section 113 would authorize the Secretary to establish standards of performance for all new stationary emission sources. Such standards would be based on the greatest degree of emission control which the Secretary determines to be achievable through application of the latest available control technology, processes, operating methods or other alternatives. We urge that this provision be modified so as to give some recognition to commercial feasibility. For example, it is well known that the use of a platinum catalyst is the best way to obtain complete clean-up of hydrocarbon emissions. However, a platinum catalyst is too easily poisoned and too limited in supply to make its use commercially feasible.

The new Section 113 would further establish a federal permit system for all new sources of air pollution. Such a system could result in a bureaucratic nightmare and unnecessarily delay new construction or modification projects. It would further give HEW the power to dictate that certain types and designs of equipment and facilities be used. Again, we strongly feel that the concern of the government should be focused on the level of emissions from a source and that each person should be given the opportunity to determine how he can best meet such requirements. Especially in light of the severe penalties provided for violation of emission standards, this permit system should be stricken from the bill.

4. Proposed new Section 304 would authorize citizen suits to enforce the law. The only apparent reason for providing this procedure is that the appropriate officials have failed to exercise their responsibilities in administering the Act. We question the validity of this assumption. But even if it were valid, then the proper solution would be for the Congress, through its oversight powers, to determine the cause of such a breakdown in law enforcement.

5. We recognize that proper administration of this Act may require that some trade secrets and confidential information be submitted to the governing agencies. However, we deem it essential that such trade secrets and confidential information should be protected from public disclosure. The various provisions of the bill relating to such protection are inadequate and should be revised.

6. The proposed new Section 111 would require that any implementation plan provide for the attainment of national ambient air quality standards within three years from the date of approval of such plan. Relief from the effect of such arbitrary deadlines could be granted only in limited instances by the courts upon petition of the governor of the state involved. The time necessary to attain such standards should be determined on the basis of our national technical and economic capabilities, in light of our national priorities. This provision should be amended so as to require attainment of such standards within a reasonable time designated by the Secretary rather than three years in all cases.

The bill contains various other features that should be closely examined. In the interest of brevity, I have not discussed them in this letter. I do strongly recommend that the Committee thoroughly review this legislation in order that our national efforts to improve the quality of our environment are not frustrated by unwise and precipitous actions.

Respectfully yours,

J. E. SWEARINGEN.

AMENDMENT TO S. —

On page 67, lines 12 and 13, strike the words "including fuels used for purposes other than vehicles" and insert in lieu thereof the following: "which, for purposes of this section, means only fuel intended for use in the transportation of any person or thing."

AMENDMENT TO S. —

Strike out all of the language beginning on page 76, line 3, and extending through page 78, line 2.

AMENDMENTS TO S. —

Amend section 113(f), pages 26 and 27, as follows: delete all language beginning on page 26, line 16, with the word "except" through line 25, and the first two lines on page 27 and substitute therefor the paragraph below:

Amend section 114, page 31 by striking all the language beginning with line 5, the word "except", through line 16 and substituting therefor the paragraph below:

Amend section 209(b), page 62, by striking the whole paragraph and substituting therefor the following paragraph:

Amend section 212(c)(2), pages 70 and 71 by striking out all the language in this subsection and substituting therefor the following paragraph:

All information reported or otherwise obtained by the Secretary or his representative pursuant to this section, which information contains or relates to a trade secret or other matter referred to in section 1905 of title 18 of the United States Code, shall be considered confidential for the purpose of such section 1905, except that such information may be disclosed to other officers or employees of the United States concerned with carrying out this Act or when relevant in any proceeding under this part. Nothing in this section shall authorize the withholding of information by the Secretary or any officer or employee under his control, from the duly authorized committees of the Congress.

AMENDMENT TO S. —

On page 25, strike out lines 1 and 2 and amend lines 3, 5, and 7 to reflect the proper alphabetical lettering: i.e. (B) to (A), (C) to (B), and (D) to (C).

AMENDMENT TO S. —

Amend section 113(b)(2), of Committee Print No. 1 (August 25, 1970) to read as follows:

Beginning with line 22:

"Such standards shall be based on the greatest degree of emission control which the Secretary, *giving appropriate consideration to technological and economic feasibility*, determines to be achievable.

AMENDMENT TO S. —

Amend section 111, page 15, line 8, by striking out the semicolon and inserting in lieu thereof a comma and the following:

Provided, however, no part of such reports containing trade secrets or confidential information shall be disclosed to the public.

AMENDMENT TO S. —

On page 13, line 23, strike the words "three years" and insert in lieu thereof the words "a reasonable time."

SUN OIL COMPANY

SUN OIL Co.,
Philadelphia, Pa., August 28, 1970.

Hon. JENNINGS RANDOLPH,
U.S. Senate,
New Senate Office Building,
Washington, D.C.

DEAR JENNINGS: Through the kindness of your office, I have had the opportunity to review Committee Print No. 1, dated August 25, 1970, of the proposed amendments to the Clean Air Act. As we discussed, I am encouraged to see in this draft an approach which reflects somewhat more than earlier drafts the philosophy of Federal prescription of targets to be met by industry, but not of the precise means by which these targets are to be met.

However, in the section dealing with fuels and additives, the application of this philosophy falls short of that which I think would be most effective in reducing automotive emissions. Specifically, in Section 212 (b) (2), the Secretary would be authorized to prohibit the use of any fuel, component, or additive for the protection of public health or welfare without any finding that such prohibition is indeed the most desirable way to achieve the protection of public health. In the case of prohibition of a fuel component or additive for purposes of ensuring successful application of an emission control system, the Secretary is not specifically required to demonstrate that the *combination* of emission control system and fuel he specifies is the most economical.

I still firmly believe that the reduction of automotive emissions will be most effectively achieved by Federal specification of allowable emissions, leaving industry free to apply its ingenuity and resources to meet these targets. If, however, the Congress does feel that in this situation some further authority should be granted the Secretary, then I do think this should be accompanied by more appropriate provisions for the demonstration that any proposed regulation of fuels and additives would be the most effective method of reducing emissions.

There is another important aspect of the regulation of fuels and additives that deserves comment. Because of the interstate nature of the petroleum and automotive businesses and the highly mobile nature of the gasoline-consuming public, a single set of regulations would be highly desirable. If it should be felt necessary to establish such regulations, there should be a provision for Federal pre-emption. I have attached some suggested language for this purpose.

I have also attached to this letter some suggested changes in Section 212(b) (1) and (2) which I feel represent a better approach. You will recognize that the language of Section 212(b)(2) is rather similar to that contained in House Bill No. 17255, which also proposes amendments to the Clean Air Act.

I greatly appreciate your interest in our viewpoint. I would be very happy to present any further comments or views on this subject that you might find of use.

Sincerely yours,

BOB.

SUGGESTED CHANGES TO PAGE 67 OF COMMITTEE PRINT NO. 1, AUGUST 25,
1970

SECTION 212 (B) (1)

The Secretary may, on the basis of information obtained under subsection (c) of this section or any other information available to him, ~~by regulation prohibit~~ regulate the use of any fuel which includes any components, including additives, in amounts

(1663)

SECTION 212 (B) (2)

Any regulation of fuels, including components and additives, based on protection of the public health or welfare shall be established by the Secretary on the basis of specific findings derived from relevant medical and scientific evidence, including a finding that it is not otherwise technologically or economically feasible to achieve the emission standards. Any regulations of fuels, including components and additives, based on protection of emission control devices shall be established by the Secretary on the basis of specific findings derived from scientific evidence, including a cost-benefit analysis comparing emission control devices or systems which are or will be in general use and require the proposed regulation, with emission control devices or systems which are or will be in general use and do not require the proposed regulation.

SECTION 212 (B) (3)

No change.

SECTION 212 (B) (4)—NEW SUB-SECTION

No State or any political subdivision thereof shall adopt or attempt to enforce any regulation respecting the composition or the chemical or physical properties of any fuel or additive except where such State demonstrates, after public hearings to the satisfaction of the Secretary, that more restrictive regulations than the Federal regulations are:

1. Required to implement national ambient air quality standards for any air quality region within such State and that
2. It is feasible to supply special fuels which will comply with more restrictive regulations without detriment to the effectiveness of the overall national program and without adverse effects on other air quality regions.

UNION CARBIDE CORPORATION

UNION CARBIDE CORP.,
Washington, D.C., August 26, 1970.

Hon. JENNINGS RANDOLPH,
Chairman, Senate Public Works Committee,
Washington, D.C.

DEAR MR. CHAIRMAN: The proposed National Air Quality Standards Act, as reported by the Air and Water Pollution Subcommittee, would make very far-reaching and profound changes in federal law and policy. While there is no dispute as to the goals sought by this legislation, there is concern about the specific provisions.

In an effort to be helpful to the Committee in refining the bill, I am enclosing a memorandum offering some of the comments and suggestions of Union Carbide. I hope you will consider them.

Sincerely,

MORSE.

COMMENTS OF UNION CARBIDE CORPORATION ON THE PROPOSED NATIONAL AIR QUALITY STANDARDS ACT OF 1970

These comments and suggestions are not a complete or exhaustive review of the proposed National Air Quality Standards Act of 1970. Time did not permit such a detailed examination of the bill. In addition, the full import of some parts, notably sections 114 and 115, cannot be adequately assessed in the absence of a committee report or other discussions of the intent of these sections (and the distinctions between them) in relation to sections 109-111.

Our comments are keyed to Committee Print No. 1, dated August 25, 1970.

I. SECTION 113

While laudable in aim, section 113, New Source Standards of Performance, gives the Secretary of Health, Education and Welfare (and ultimately the EPA Administrator) enormous new economic powers over the construction and location of new industry. He can say "No" to additional steel mills in Gary, electric power plants in New York, chemical plants in West Virginia, Delaware, and St. Louis, or petroleum refineries in Maine. Such authority must be carefully defined and well safeguarded if it is to be effective. Therefore, we believe the following amendments to section 113 are desirable.

A. On page 23, lines 12-16, the rule-making provisions of the Administrative Procedures Act (section 553 of Title 5) should apply to the designation of categories of stationary sources.

B. The performance standard for new sources, specified in lines 23 and 24 of page 23 and lines 1 and 2 of page 24, is unreasonably rigid and inflexible in the present draft. For instance, it would apparently require the Secretary to ban all use of coal as a new fuel source because an alternative—natural gas—provides "the greatest degree of emission control". These performance standard requirements, because they do not permit consideration of economic factors, could result in construction of plants abroad that would otherwise be built in the United States and the serious exportation of American jobs and productive capability. We believe these problems could be alleviated by the addition, after the word "alternative" in line 2 of page 24 of the words: "giving due consideration to the practicability and to the technological and economic feasibility of complying with such standards." This clause, taken from section 108(c)(4) of the present law, would give the Secretary the flexibility which we believe is required by the public interest.

C. Because of the great economic importance, to the applicant, his employees, and the national interest, of the Secretary's decisions under section 113, we

believe the statute should put a time limit on his certification under subsection 113(d)(2). Inaction on his part should not be allowed to paralyze the planning of any industry. We suggest that the provisions now applicable to the Secretary under the Food, Drug and Cosmetic Act (21 U.S.C. 348(c)(2)) requiring a decision within 180 days be incorporated in this section.

D. It also seems desirable to vest the Secretary with authority to waive part or all of the requirements of section 113. Such a provision is found in section 114(c)(4) and should be incorporated in section 113.

II. CONFIDENTIALITY OF TRADE SECRETS

Trade secrets are a matter of particular importance to the chemical process industry and publication of detailed emission data or plans for a new plant could result in the damaging disclosure of such things as the use of new processing steps or catalysts. Trade secrets obviously should not be used as a cloak for evasion of the Act, but confidential data can be protected without impairing the purposes of the Act. We believe the confidentiality provisions on page 26, lines 17-25 should be made applicable to the preconstruction review required in section 113(d)(1) and to the emission data under section 117(a)(3).

III. ADMINISTRATIVE PROCEDURES

In view of the potentially serious economic consequences, in terms of employment, investment, and profits of the decisions which the Secretary must make under the terms of this bill, we believe the interests of fairness would be better served if, in general, the Secretary were required to provide an opportunity for an agency hearing and required to make his decisions on the basis of the record rather than just on written comments under section 553 of Title 5.

Likewise, the record-keeping and monitoring requirements of sections 113(f), 114(d) and 117(a) should be established on the basis of a rule-making procedure because of the potential cost and the serious technical problems which can be involved in complex monitoring equipment and processes.

IV. CITIZEN SUITS

We believe the provisions of section 304 will simply be costly, contentious and confusing—but not very effective. The authority, for instance, to bring a civil action against the Secretary for an alleged failure to exercise any duty established by the Act may well mean that no decision made under the Act will be final until settled by the Supreme Court. Air quality standards, new source standards, emission controls, vehicle standards might be all cast into doubt until the last suit was completely litigated. We have no reason to believe the Federal, State and municipal authorities will be derelict in their duty to enforce applicable standards and hope the section will be deleted. However, if the Committee retains this provision, we believe the element of fairness requires that named parties be given the same right of notice which is accorded the Secretary under section 304(a)(3).

UNITED STEELWORKERS OF AMERICA

UNITED STEELWORKERS OF AMERICA,
Washington, D.C., August 31, 1970.

Hon. EDMUND S. MUSKIE,
U.S. Senate,
Washington, D.C.

DEAR SENATOR MUSKIE: The product of the Subcommittee on Air and Water Pollution is pending before the full Senate Public Works Committee.

Our Union urge that their results not be compromised by reported heavy pressure from special interest groups.

In particular, we urge that there be federal authority to develop national emission standards for new stationary sources. In many cases, current plants claim they will "runaway" from present locations to escape air quality controls.

Certainly there should be federal authority to regulate emission of any pollutants from both new and existing industries where that pollutant is extremely hazardous to health.

Since the automobile is one of the major offenders, the effective date for emission standards should be advanced to 1975 with the auto industry giving a 100,000 mile warranty on anti-smog devices and state governments be given funds to develop testing devices to control smog from on-the-road automobiles.

We hope that the subcommittee's bill will be reported out of the full committee without any weakening amendments.

Sincerely,

JOHN J. SHEEHAN,
Legislative Director.

(1667)

VIEWS OF SENATOR PHILIP A. HART

U.S. SENATE,
COMMITTEE ON THE JUDICIARY,
SUBCOMMITTEE ON ANTITRUST AND MONOPOLY,
Washington, D.C., August 25, 1970.

Hon. EDMUND S. MUSKIE,
*Chairman, Subcommittee on Air and Water Pollution,
Committee on Public Works, U.S. Senate, Washington, D.C.*

DEAR SENATOR MUSKIE: Thank you for your letter of August 25 soliciting my views on a tentative proposal to include an antitrust exemption in the proposed National Air Quality Standards Act of 1970. It is my understanding that the purpose of such an amendment to the pending bill would be to authorize the automobile and petroleum industries to meet in a public forum under the supervision of the Justice Department and the Department of Health, Education, and Welfare to explore action required by the proposed bill for reducing engine emissions by 1975. Although I have not seen any proposed language and the staff of the Antitrust Subcommittee has only had a limited opportunity to consider the matter, it is my recommendation that:

- (1) Such an exemption is unnecessary;
- (2) The drafting of an exemption would take considerable effort and require hearings by the Antitrust Subcommittee; and,
- (3) If further thought and examination indicate an exemption is absolutely essential, there are alternatives that are available which do not require amending the antitrust laws.

An exemption is unnecessary for at least two reasons:

- (1) Government instigated and supervised cooperation among competitors or between industries does not violate the antitrust laws; and,
- (2) Even if this kind of conduct raised an antitrust issue, its legality would be measured by the rule of reason or clearance for cooperation may be obtained from the Justice Department.

The first proposition has been recognized since *Parker v. Brown*, 317 U.S. 341 (1943), and the second is fully explained by the enclosed excerpts from testimony by former Assistant Attorney General Turner before the Commerce Committee in 1966 on the analogous problem of an antitrust exemption for the formation of power pools.

Any attempt to draft an antitrust exemption must take account of: The antitrust consent decree entered in 1969 enjoining an alleged conspiracy to suppress innovation in pollution control devices (*United States v. Automobile Manufacturers Association, Inc.*, 1969 Trade Cases paragraph 72, 907, D.C.D. Calif.), copy enclosed; several pending treble damage actions filed by states and municipalities against the automobile manufacturers alleging a conspiracy to suppress emission control technology; and, the suit by fifteen states—invoking the original jurisdiction of the United States Supreme Court—against the automobile manufacturers seeking alleviation of auto pollution on Sherman Act and common law nuisance grounds. Unless an exemption is absolutely essential for the type of conduct the bill seeks to encourage, I would be extremely reluctant to raise the issue in light of these complicating factors. In addition, most exemptions cover far more ground than is necessary and often result in conduct which might ultimately frustrate the very purpose of the bill. It seems justified to suggest that the past record indicates a course of joint action to suppress innovation in pollution control technology and that antitrust policy has been used to end this type of conduct. At this juncture it does not seem wise to remove antitrust controls to promote innovation, since the ultimate result may be a repetition of what has apparently occurred in the past.

The spur of competition may well prove to be the most reliable mechanism for insuring the development of technology to meet the proposed bill's 1975 standard. It is my hunch that forced cooperation may result in both the petroleum and auto manufacturing industries relaxing their research efforts. One may reasonably ask: "Why expend great sums in research when we can get access

to everyone else's research?" Absent the incentives of competition, I am not very confident that the management of any of the firms involved in these industries could justify the necessary large research expenditures. If it is feared that one firm may corner the technology through patents, trade secrets, or know-how, your Committee may wish to consider the desirability of mandatory licensing at reasonable royalties of proprietary information which would assist in ultimately achieving the proposed Act's 1975 emission standard. If the Committee considers this alternative, I would suggest that careful attention be given to the consent decree in *United States v. Automobile Manufacturers Association, Inc.*, 1969 Trade Cases paragraph 72, 907 (D.C.D. Calif.), copy enclosed, and that the Antitrust Division be consulted.

I hope these suggestions will be of assistance to the Public Works Committee. Please keep me advised of the course of action the Committee intends to follow. The decision will be of great interest to me and the Antitrust Subcommittee.

Sincerely,

PHILIP A. HART, *Chairman.*

Enclosures.

AMENDMENTS TO FEDERAL POWER ACT (ANTITRUST REVIEW)

Wednesday, July 13, 1966

U.S. SENATE,
COMMITTEE ON COMMERCE,
Washington, D.C.

The committee met at 10:22 a.m. in room 5110, New Senate Office Building, Hon. Warren G. Magnuson (chairman of the committee) presiding.

The CHAIRMAN. The committee will come to order.

The Chair has a short opening statement.

This morning's hearing is the second meeting on S. 3136 which would authorize the Federal Power Commission to review and, in appropriate cases, exempt from the operation of antitrust laws, contracts dealing with the sale or exchange of electricity, interconnections, or power pooling agreements. I reemphasize this because there was some question yesterday about how the bill evolved and why it was here and why it was introduced.

The bill is a product of the experience negotiating the Pacific Northwest-Southwest intertie. The utilities involved in the intertie have indicated that their continuing voluntary efforts to secure practical pooling agreements are inhibited by the possibility of prosecution or litigation under a strict application of the antitrust laws. S. 3136 represents their suggested solution to the problem.

Yesterday's witnesses were generally favorable to this approach to the problem, although there were several perfecting amendments recommended, which will be submitted to the committee for their consideration.

Our first witness this morning is Mr. Donald Turner of the Antitrust Division, Department of Justice.

Mr. Turner, you have a statement prepared. We will be glad to hear from you.

STATEMENT OF DONALD TURNER, ASSISTANT ATTORNEY GENERAL, ANTITRUST
DIVISION, DEPARTMENT OF JUSTICE

Mr. TURNER. Yes, Mr. Chairman. Thank you very much.

I appreciate the opportunity to discuss with you a bill now being considered by this committee, S. 3136. This bill allows the Federal Power Commission to review contracts that provide for the sale or exchange of electricity, for the interconnection, pooling, or coordination of power systems or for the joint use of facilities for generating or transmitting electricity. If the Commission finds that any such contract will not unduly restrain competition when considered in relation to the purpose of the Federal Power Act, the Commission may immunize from the operation of the antitrust laws all activities of parties to the contract in negotiating it and in carrying it out. The purpose of allowing the Commission to grant antitrust immunity is presumably to encourage power companies to pool and to coordinate the use of their power resources and to build and to use jointly power generating or transmitting facilities.

After a thorough review of the arguments advanced in support of the bill, the Department of Justice does not believe that a case for its enactment has been made out. Moreover, of course, we are opposed in principle to legislation that provides for exemptions from the antitrust laws unless the need for this type of legislation is clearly shown. And, we fear that overly broad language in the bill, if enacted into law, may have harmful consequences. For these reasons, we are opposed to the enactment of this bill.

1. The Power Commission believes—and I have no reason to doubt—that power companies should arrange to pool many of their power producing and transmitting facilities and that they should arrange to interconnect their power lines, because pooling and interconnection often provide the only ways by means of which these companies can enjoy the benefits of advanced technology and economies of scale. While pooling and interconnection may often be highly desirable,

I do not believe that it has been shown that an exemption from the antitrust law is necessary to encourage companies to enter into this type of joint arrangement.

It cannot be claimed that the antitrust laws themselves prohibit this type of desirable cooperation. Under the antitrust laws, pooling and other similar arrangements are tested by a "rule of reason." They are legal unless they unjustifiably restrain competition. Thus, pooling arrangements necessary to secure substantial economies of scale or similar substantial benefits would normally not violate the antitrust laws. Moreover, ancillary agreements are legal if they are necessary to carry out a legitimate primary agreement. Thus, while agreements to refuse to deal with competitors or to divide sales territories are normally illegal, if the parties can show that they are necessary to secure the benefits of a desirable pooling arrangement, their agreements will probably not be invalid under the antitrust laws.

In fact, I might add, parenthetically, that such restrictive agreements would usually be difficult to justify on the ground that they are necessary to encourage joint investment or pooling for, normally, if parties can be persuaded to invest money only by allowing them to increase prospective profits by entering into agreements that restrict competition, it is better for the economy that the proposed investment not be made. In a generally competitive economy investment funds are allocated most efficiently if investments are made where they will generate the highest profits in the absence of competitive restrictions. And, if, in the absence of such restrictions, profits are not sufficiently high to attract investment into electric power, it may be better that no investment take place. It may be, however, that because of special circumstances, competitive restrictions are justified in the electric power industry when they would not be in other industries. And, if such justification can be shown for a restriction, it would not be illegal.

It may be claimed, however, that even though the antitrust laws themselves do not make reasonable agreements illegal, it is nonetheless uncertain exactly how the antitrust laws apply to a particular case, and this uncertainty discourages firms from entering into joint arrangements. I do not believe that the way in which the antitrust laws operate is so uncertain. Antitrust lawyers are familiar with their operation and may be consulted by power companies. Moreover, any firm may ask the Department of Justice to indicate what its position would be concerning a particular proposed arrangement. It need only submit relevant information to the Antitrust Division under our business review procedure, and ask for a statement of the Division's enforcement intent. It is doubtful that Power Commission approval can provide much more certainty than Justice Department approval under the business review procedure.

That the existence of possible antitrust liability has not deterred the growth of coordinated power pools and interconnections is strongly suggested by the fact that during the past few years independent utilities in increasing numbers have joined together to form pools or planning groups, to coordinate their capital spending programs, to provide each other with emergency assistance, to share surplus capacity and to cooperate in numerous other ways.

The last three annual reports of the Federal Power Commission provide much evidence of the rapid growth in recent years of pooling, planning groups, and interconnections. See 1963 annual report, pages 29 and 59; 1964 annual report, pages 59-62; and 1965 annual report, pages 90-92. Today, there are 19 such pools, and, these 19 pools account for about 50 percent (*ibidem*, p. 5) of total American generating capacity.

Not only have independent companies joined to form pools, but also groups of pools have interconnected to join larger networks of truly nationwide scope. Late in 1962, three existing pools interconnected to the world's largest synchronous network. It covers 41 States, and two provinces, and has a total generating capacity of 146 million kilovolts. See 1963 annual report, FPC, page 59. Moreover, the 1963 annual report of the Federal Power Commission predicts a "tremendous upsurge" in high voltage planning, which will result in "pooling arrangements" entailing construction of several thousand miles of "extra high voltage lines."

With the use of extra-high-voltage transmission lines, independent utility companies are able to interconnect over a much broader geographical area than was previously possible. A very good case in point is the Pacific Southwest-Pacific Northwest intertie. The intertie serves to interconnect two areas which are 880 miles apart. It involves the participation of at least 10 non-Federal entities as well as several Federal ones and includes 4 extra-high-voltage transmission lines (1963 FPC Reports at 29).

The 1964 FPC report cited four pooling agreements as typical of the "many * * * announced" that year. These pools alone involved the articulation of 12 individual companies and the entire American Electric Power Co. system (p. 61).

The 1965 FPC report indicated in that year four new pools and coordinating groups were announced, in addition to a number of proposals for extending and strengthening existing pools. Further, large numbers of power companies have joined planning groups, in which they plan and coordinate their programs for future plant capacity. Of the 8 principal planning groups in the United States, 4, with a combined membership of nearly 90 utilities, have been formed since January 1, 1973. (Speech, F. Stewart Brown, p. 6, and table II.) And two new atomic generating plants, Yankee Atomic, and Connecticut Yankee, are owned by power companies that wished to "pool" the risks and high costs of entering this technologically advanced field.

This substantial record of growth has taken place with no immunity from antitrust laws.

2. Since a need has not been shown for this bill, I oppose its enactment, for as the Commission has recognized, the competitive standard contained in the bill is far weaker than that contained in the antitrust laws, and I do not believe it wise to create exceptions to the antitrust laws without a clear showing that they are necessary to serve the public interest. The reason for my position is a simple one. The antitrust laws are designed to promote and to maintain competition. Competition exerts pressure upon firms that leads to more efficient methods of production, to better products, and to lower prices. As our past history and present wealth amply demonstrate, a competitive economy is likely to be a most efficient and productive one. Thus, we should be very careful when considering legislation that may lessen competition. Antitrust exemptions may well lessen competition, for the scope of any written exception to the antitrust laws is inevitably vague. Such an exception surely will affect competition in numerous unpredictable ways, perhaps eliminating it where it is quite desirable. Because we cannot be certain that a proposed exception to the antitrust laws will not harm competition seriously in the future, the proponents of any such exception should bear a heavy burden of proving its necessity.

The fact that an industry is regulated does not, in itself, show that the firms within the industry should be excepted from the application of the antitrust laws. Regulation and competition may both help to achieve efficiency and productivity. In industries with certain technical characteristics—such as the electric power industry—regulation may be both necessary and desirable to insure an efficient allocation of resources. But, competition may still play an important role in insuring that such industries operate efficiently. After all, where there is regulation and no competition, firms may become lazy, for they may feel that they are, in effect, guaranteed a profit. On the other hand, if regulated firms also face some competition, they may work harder to keep costs down, to improve the quality of their service, or to devote sufficient resources to research and innovation. Thus the antitrust laws apply to many regulated areas of the economy such as insurance, banking, communications, fuel and agriculture.

At the present time the power industry is just beginning to feel the competitive spur. Many of the same technological advances that make pooling and interconnection possible also make possible new forms of competition. For example, a firm with surplus energy or extra generating capacity can attempt to sell and transport electricity to an area with a power deficit, and, in doing so, it may compete with other firms also having surplus energy or extra generating capacity to sell. Similarly, companies may compete to exchange power with areas that have offsetting peak periods. Competition in the industry will probably become more, rather than less, important. It would be unfortunate if an antitrust exemption allowed power firms to stifle this growing competition unjustifiably—and we run a substantial risk that just this will happen if an antitrust exemption is enacted.

Even if this bill did not weaken the antitrust standards to be applied to power company contracts—and I believe it probably would—I would be opposed to it, for I do not believe it wise, again, without a clear showing of necessity, to proliferate the number of governmental bodies enforcing antitrust standards. Whenever different bodies enforce the same law, different enforcement approaches are almost certain to occur and to persist despite the theoretical capacity of the courts to enforce eventual reconciliation.

Moreover, it is our belief, based on past experience, and I say this respectfully, that regulatory agencies entrusted with the duty of assessing "competitive effects" often give competition insufficient regard. As you know, the Department of

Justice on many occasions has appeared in court in opposition to actions of agencies such as the Interstate Commerce Commission on such matters as merger and new entry, where we feel convinced that the agency has greatly undervalued the contribution that competition makes to the public interest.

These considerations of course do not show that regulatory agencies should never administer antitrust standards. They simply suggest that before legislation is enacted empowering an agency to do so, a strong and convincing case should be made showing that the legislation is necessary.

3. The present bill illustrates why we should grant antitrust exemptions with the greatest of care. The bill would require approval of any contract that "will not unduly restrain competition when considered in relation to the purposes" of the Federal Power Act. It thus substitutes a new and untried standard for antitrust standards, which, while hardly crystal clear, have at least had the benefit of 75 years of articulation in court opinions. The Commission considers the standard in the bill a "balancing" standard rather than an "antitrust" standard—thus suggesting a weaker standard than that contained in the antitrust laws. But to what extent is it weaker? How will it be interpreted? Will the Commission adopt antitrust rules and practices? For example, in determining whether a division of sales territories is legal under the antitrust laws, the courts will consider not only whether such an agreement will help carry out the purposes of a desirable pooling arrangement. They will also consider whether the agreement is more restrictive than necessary to carry out the pooling arrangement's legitimate purposes; they will ask whether the parties have produced the same end result in a less restrictive way. Will the Power Commission also ask whether ancillary agreements are more restrictive than necessary? I simply do not know, but there is always the risk that this new standard will be interpreted in such a way that competition is unjustifiably restrained.

Moreover, under the bill, once the Federal Power Commission has approved a contract, not only is the provision itself immune from antitrust attack but also the parties' activities in negotiating the contract may not be attacked, and their activities in executing it are similarly immune. The fact that activity is subject to the antitrust laws may plan a valuable role when a contract is being negotiated. It may, for example, prevent unlawful collusive agreements among power companies not to submit various alternative and more competitive proposals to the Power Commission. Antitrust jurisdiction may also prevent conspiracies between firms negotiating a contract that would unreasonably and harmfully exclude other firms from their proposed pool or that would lessen competition in other ways.

Further, the immunity granted pooling arrangements or arrangements for joint use of transmission facilities might be construed to allow power companies to refuse subsequently to transmit power produced by competitors even when such refusals would be illegal under the antitrust laws. The extent to which approval of a contract would immunize these activities from the antitrust laws is at best unclear. At worst, the bill may impose upon the Commission the dilemma of either refusing to approve a desirable contract or immunizing many undesirable restrictive activities taking place during contract negotiations or in the contract's execution.

In sum, my reasons for opposing the bill are the following: First, I do not believe sufficient reason has been given for the bill's adoption. The antitrust laws do not forbid desirable joint activities and they do not seem to have deterred companies from engaging in them. Second, I oppose in principle granting an exemption from the antitrust laws without a strong showing of a need for it because it is difficult to know just what effects such exemptions will have. They may lead to less efficient and less productive industries. Finally, the exception written into the present bill may sweep within its general language anticompetitive activities for which there is no justification. Moreover, there is reason to believe it particularly inopportune to provide an antitrust exception at the present time, for an antitrust exception means lessened competition and competition is beginning to be a factor of growing importance in the electric power industry.

The Department surely does not intend to launch a major antitrust effort in the electric power industry. It simply fears the possible future effects of this bill, effects which are unclear and for which no important justification has been shown. For these reasons, the Department of Justice opposed the enactment of S. 3136.

I may add, the Bureau of the Budget advises that while there is no objection to the submission of this report, it believes that the subject matter of the bill has far-reaching implications, that it requires further intensive study, and that the need for such legislation has not yet been demonstrated.

That concludes my prepared statement, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Turner.

Did the Director of the Bureau of the Budget authorize you to make this statement?

Mr. TURNER. I was out of town.

The CHAIRMAN. I shouldn't pick on you because it has been included in all agency comments.

Who discussed this with the Bureau of the Budget in the Department of Justice?

Mr. TURNER. Our channel is up through the Deputy's office, Deputy Attorney General, and we are informed by the Deputy that this came back from Budget.

The CHAIRMAN. He went to the Budget with the bill?

Mr. TURNER. With my statement, that is correct.

The CHAIRMAN. Has Budget looked at the bill?

Mr. TURNER. I assume that they have.

The CHAIRMAN. Is there any financial matter involved in the bill?

Mr. TURNER. Well, sir, my understanding is that the Bureau of the Budget is administration coordinator.

The CHAIRMAN. I understand what the Department's understanding is, but I just want the record clear. Is there any money involved in the bill?

Mr. TURNER. Not to my knowledge.

The CHAIRMAN. I would like to have a memo of who discussed this with the Budget and who in the Budget agreed to this and whether the Budget looked at the bill or not. I imagine that they did. I would just like to know, because if they are opposed to this bill, they ought to come up here and say so.

Mr. TURNER. I would be happy to get some more details to supply you with.

The CHAIRMAN. I think all departments do what you folks do.

There are a lot of things in your statement that I would like to discuss.

What do you consider to be competition in the electric power industry? You mention competition a great deal in your statement.

Mr. TURNER. By and large there is not and could not practically be at any one time competition in the retail distribution of electricity. You would get—

The CHAIRMAN. All of this is ultimately to see that the consumer gets the best possible service and lowest cost power where available.

Mr. TURNER. Right. But there does seem to be considerable room for competition and it is taking place, according to my understanding. I don't pretend to be an expert in electric power field, but wholesale distributors, or people who are generating power surplus to their own needs, if they also have some distributional facilities, will compete for the opportunity to supply power to local retail distributors and—

The CHAIRMAN. Do you agree as a general proposition that the meaning of competition, as we know it in the electrical power industry, is a little bit different than the case of two banks here competing for my deposits or two people competing for my purchase of some one thing?

Mr. TURNER. Yes, sir.

The CHAIRMAN. Obviously it would be very impractical, I would think, and I think all of the testimony will bear this out, that you would have two power companies both trying to serve the same block.

Mr. TURNER. That is correct.

The CHAIRMAN. And having one of them having five customers and the other having five. You feel competition exists more at the wholesale level.

Mr. TURNER. In addition, too, sir, there are of course developing areas, and also other situations where companies are abutting each other and there may be a scrap over the opportunity to serve retailing areas that are just developing. So you can compete for that.

The CHAIRMAN. What I am trying to say is that this is a different situation than in many other industries.

Mr. TURNER. Oh, yes; the fact that you have as extensive regulations as you do, Federal and State—

The CHAIRMAN. So that we get into a different field here.

Now following that through, you say that you have some fears that the Federal Power Commission would not adopt the certain rigid standards that the Department of Justice would in hearing these cases?

Mr. TURNER. Let me restate my point, Mr. Chairman—

The CHAIRMAN. Maybe I put it wrong.

Mr. TURNER. We feel, and I have tried to be honest about this, we feel that there probably would be some difference in the approach taken by the Power

Commission and ours. However, I do not think it appropriate to characterize the antitrust approach as a rigid one. Indeed, it is not in the problems of this kind, even if you are talking about areas subject to no regulation.

The CHAIRMAN. I have great respect for the Antitrust Division, and I don't mean "rigid" in that sense. But, you feel that the same standards, let's put it that way, may not be applied?

Mr. TURNER. That is correct.

The CHAIRMAN. You mentioned the ICC. Because the Antitrust Division felt since they were not applying the standards that you thought should be applied in merger cases, you have intervened in some of these cases?

Mr. TURNER. That is correct.

The CHAIRMAN. Do you have any reason to feel that you would not be able to intervene in the power cases if you felt that they were not going the right way?

Mr. TURNER. No, my understanding is that we would be able to intervene.

The CHAIRMAN. You would not?

Mr. TURNER. We would, that is right, and so the question comes down again to one of whether the appropriate way of dealing with matters of this kind is to vest jurisdiction in the Power Commission to grant immunity with the right of the Antitrust Division to appeal, the Department of Justice to appear before them, to raise any issues that the Department sees fit to raise or whether independent court jurisdiction under the antitrust laws should be maintained.

That is really the issue, and we believe that a pretty good case, a very strong case should be made for moving it over into the Commission's jurisdiction, and we don't think it has been.

The CHAIRMAN. Your statement is clear that under any interpretation of the bill you could appear, such as you do in interstate commerce competition?

Mr. TURNER. That is my understanding, and if it were not so, I take it you would do that.

The CHAIRMAN. If it were not so, we would surely have it that way.

Mr. TURNER. That is right.

The CHAIRMAN. And you feel that is not as effective as you initially taking the case yourself?

Mr. TURNER. Let me put it this way, we believe and we think history will bear us out, that antitrust considerations would, as a practical matter, be given less weight, going that route, than it would if we bring the case, because as you know—

The CHAIRMAN. You make a good argument for the bill there, when you say it is a "practical" matter. I am not so sure that the Antitrust Division wouldn't be even more effective on a violation of the spirit of the law if the Antitrust Division were appearing as an independent party in a power case than taking it on all themselves. I think the Federal Power Commission knows more about it, and they should know more about it.

Mr. TURNER. Indeed they do know more about the power industry than we do. I would hasten to add, however, that I think we do a pretty good job of finding out about an industry when we have to—

The CHAIRMAN. I wonder if you don't think coming in as an independent party, friend of the court, or whichever way you want to put it, you might even be much more effective.

Mr. TURNER. I think I can honestly say I don't believe so, Mr. Chairman. Let me try to explain why. In the first place, insofar as results are concerned, the Commission, any regulatory commission can listen to us, but if they don't like the sound of the music they don't take it into account. And if we then take the case to court, we take it in a posture in which the decision of the agency is likely to be upheld unless it appears, in the eyes of the court, that the agency has gone completely wild.

Now, to go back again, then, if we feel in a particular case that a particular contract should not receive immunity, and we make an appearance before the Commission and urge our cause, and they refuse to agree to our arguments, we are then in a very difficult position, and we are in a much more effective position when we are operating independently.

The CHAIRMAN. Now, a great deal of your testimony was devoted to the bill as written. I like to think of bills as working papers to achieve objectives, and I was going to suggest if the Department has any suggestions to make the bill more palatable to the Department by the way of amendment, we would like to have them.

Mr. TURNER. Well, I have no doubt that we could revise the language of the exemption a great deal to make it more palatable than it now is, but—

The CHAIRMAN. It is my understanding that the Department has a real, I think, maybe a serious objection to the section that makes "all orders entered hereunder final and conclusive." Is that correct?

Mr. TURNER. I hadn't focused on that particular language. This is, I think, normal statutory language on agency procedure, and I don't think there is anything unusual about that.

In other words, if this is the avenue—

The CHAIRMAN. What I was thinking about, suppose in the Federal Power the bill was passed and the Federal Power Commission made a decision and you in Justice felt that this was the wrong decision, that it violated the spirit and the whole intent and the purposes of the antitrust laws, that you might want to even suggest that you go into court with them or take it to court, or have somebody take it to court?

Mr. TURNER. Well, even this language, of course, permits court review, as is ordinarily available of administrative agency determination. The only alternative to that, you could have something analogous to what you have with ICC determinations, and that is the right on our part to initiate an original action in a district court to upset the determination, but—

The CHAIRMAN. What has been your experience on mergers down at the ICC? Have they allowed you to appear to present your case?

Mr. TURNER. Oh, yes, and we have opposed them in court, that is, where they have approved some.

The CHAIRMAN. The Department opposed in the New York Central-Pennsylvania merger, did they not?

Mr. TURNER. We have opposed that both before the hearing examiner and before the ICC, and we now have under consideration what action to take, if any, on the basis of the Commission's determination. We opposed the Atlantic Coast Line and Seaboard Railroad merger. That is still in litigation, and we, I think, have opposed some others in the past. My recall of history isn't too good.

The CHAIRMAN. On page 11 of your statement, you say you oppose enactment because the competitive standards contained in the bill are far weaker than contained in the antitrust laws.

Now, I am a little confused about that, because I thought the language in the bill incorporated at least in spirit or intent that the competitive features should be one of the major considerations in any hearing before the Power Commission. And if the language doesn't do that, we ought to make it so.

Mr. TURNER. I think the language here would leave the Commission room to apply a rather wide range of approaches. They could conceivably, in fact, on the basis of language of this kind—

The CHAIRMAN. Competition has been stressed by all of the witnesses. This was a very important thing. Only when the public interest is best served in other ways should competition become secondary.

Mr. TURNER. It is quite possible the Commission under language of this kind could come out the same way you would in antitrust case.

The CHAIRMAN. Actually there is no absolute virtue in competition in some cases any more than there is an absolute virtue in low bidding. Sometimes it might work just the other way. Generally speaking there is a greater virtue.

Mr. TURNER. I think one of the principal points we have been trying to make is that the antitrust laws are quite capable of accommodating considerations of this kind, indeed, always have, and we have classically with regard to joint ventures taken into account the argument and demonstration that this kind of a joint venture, this kind of arrangement, is necessary to achieve certain efficiencies which could not otherwise be obtained.

The CHAIRMAN. How many of these pooling arrangements that you cited here on page 5, that are now in operation, came to the Department of Justice for a pre-judgment?

Mr. TURNER. I can't answer that question.

The CHAIRMAN. Would you find that out and put that on the record?

Mr. TURNER. Yes, I will. Of course a lot of this took place before I came in. I don't personally know, but I can get that.

The CHAIRMAN. But you stress the fact that this can be done now.

Mr. TURNER. It can always be done.

The CHAIRMAN. You say that 19 pools act for 50 percent of the total American generating capacity. Apparently those are pooling arrangements now in existence.

Mr. TURNER. That is right.

The CHAIRMAN. And I would think it would be very pertinent to this inquiry as to how many of them went to the Department of Justice and laid out the plan and said here is what we are going to do, and the Department of Justice said, all right.

Mr. TURNER. I would be happy to get that information. I might add that if it turned out that none of them did, it seems to me that this would make our point even stronger, that they just felt it was so clear, they didn't think there was any necessity of checking with the Department.

The CHAIRMAN. Now, they have to go to the Power Commission too, don't they?

Mr. TURNER. Some kinds of arrangements, yes. I am not fully conversant with the dimensions of the FPC's jurisdiction on the matters of this kind, but a good many arrangements do have to receive their approval.

The CHAIRMAN. We will ask the Power Commission to put in the record the amount.

Mr. TURNER. We may have gotten involved not through that route, that is through direct approach by the companies concerned, but some of these matters may have been referred to us as, for example, Pacific intertie was by the Department of the Interior.

Incidentally, Mr. Chairman, you prefaced the session this morning with some comments on that, and if I may, I would just like to put into the record a very brief summary of what our concern and activity with that was. As you know—

The CHAIRMAN. I was going to ask you, and I am a great believer in this process that you have, but on page 4, you say opinions can be given under your business review procedure.

Mr. TURNER. That is right.

The CHAIRMAN. And the question was, do these opinions prevent subsequent action by the Department of Justice? This fear was expressed here by many of the witnesses.

Mr. TURNER. Let me put it this way. In theory, the Department of Justice can never give a legal answer that binds itself. As a practical matter, if a particular plan of this kind were submitted to us and we said we would have no present intention of proceeding, that would certainly block, as a practical matter, any subsequent suit attacking the initial inception of the contract, it would a fortiori block any criminal suit. Nobody would think of bringing one.

It might be that future developments might make an arrangement that previously seemed all right, now seem not all right, and if such developments took place, the Department would, of course, be free at that point to call people in and say, now we think at this point you ought not to continue to carry on this particular agreement or this particular restriction. But that would, as I say, operate prospectively only and nobody would dream of filing an antitrust suit—

The CHAIRMAN. I think as a practical matter it would be a little difficult for someone later on to change the policy although don't apply that rule to the Internal Revenue Service.

Now that brings me to this point. In the Pacific Northwest intertie matter, where it looks like all of the factors point to it being in the public interest, the legal advisers have a great fear that they might be in technical violation of the antitrust laws.

Mr. TURNER. I don't know what the phrase "technical violation of the antitrust laws" mean.

The CHAIRMAN. They want somebody to make the decision for them and make it final and conclusive so they can proceed with their plans, such as the intertie, because this is a big business. It requires a lot of planning, a lot of capital investment to give the people the service they need at the lowest cost. If there is any legal cloud, it makes it very difficult to proceed.

Mr. TURNER. I would respond, I think, to that as I indicated in my statement that these legal clouds as a practical matter can almost always be eradicated by advance clearance with the Department. And in good many of the situations, I am quite sure that sophisticated antitrust lawyers don't even have to come to the Department, they can advise their power company clients on the basis of what they have and what they think is all right.

The CHAIRMAN. I think we all understand each other about the situation here. I think you would agree with me that we were dealing with a little different problem in the electric power industry and the question of pooling and mergers, than we are in the usual case of competition as we think of it in the business world in the United States.

I note you refer to the overly broad language of the bill on page 2. You just refer to the term:

"And we fear that the overly broad language of the bill may have harmful consequences if enacted into law."

May I suggest that you might give us some ideas of how you think the broad language might be improved, if we pass it into law?

Mr. TURNER. We would be happy to do so, Mr. Chairman, although I think as you are quite aware, when somebody is opposed to a bill, they may have some reluctance to help out getting it passed by watering it down.

The CHAIRMAN. That is what departments are for, that is why we asked for report on the bill. Otherwise we wouldn't consult you at all.

Mr. TURNER. I prefaced my remarks by saying we would be happy to.

The CHAIRMAN. You have helped us out many times to improve a bill you didn't like. Two weeks ago in here you did, yes. It made it a little better, a little more sensible.

The Department of Agriculture report states the following:

"The problems of the rural electric systems are compounded by the practices of some of their wholesale power suppliers. These suppliers are able to impose dual rates and other restrictive provisions in the wholesale power contracts."

Does this type of contract seem to raise an antitrust question?

Mr. TURNER. I am not familiar with it but dual rates, if by that they suggest somebody is saying we charge one rate for you if you will do this, and another rate if you don't, this may raise some antitrust questions. I mean if different rate differentials are being used to coerce people into some noncompetitive course of behavior—

The CHAIRMAN. That is one of the complex problems involved.

Now just one more question for the record, the report of the Legal Advisory Committee of the national power survey is 3 years old.

What I want to get in the record is whether or not your opinion, in light of new technological advances and complexities we have been talking about, has changed?

Mr. TURNER. Mr. Loevinger wrote a letter in response to certain questions.

The CHAIRMAN. You received a report and you were looking at it. Now 3 years has passed and am I to understand from your statement that your position has not changed in 3 years—

Mr. TURNER. Let me say this, my position is as I reflect in my statement today. Let me make a couple of comments on the letter that was submitted by the Antitrust Division to that power survey committee. In substance the letter suggested that the divisions of territories and the like raise serious antitrust questions. Indeed they do.

The CHAIRMAN. You were submitted those questions.

Mr. TURNER. Of course they raise serious antitrust questions. I would however like to amplify somewhat the response to two questions, both in substance asking whether approval by regulatory agencies had any impact on antitrust laws.

The letter that was sent 2 or 3 years ago replied, and quite accurately—

The CHAIRMAN. For the record the letter was signed on June 7, 1963, and signed by Mr. Loevinger.

Mr. TURNER. That is right. Mr. Loevinger replied to two of these questions quite accurately that under the law as it now stands, approval by regulatory agencies would not immunize particular contracts from the impact of the antitrust laws.

What I would go on to add to that response is this. While of course, as Mr. Loevinger pointed out, here is no immunity, we are dealing with an area in which peculiar needs of the industry are highly relevant it seems to me quite clear that approval by the Power Commission, even without the right to immunize under the antitrust laws, would be given a great deal of weight in any deliberations by the Department of Justice because that is a reflection of what an expert agency thinks the needs of the occasion are.

Now I might also note, in all of these years, we have brought no antitrust proceedings against arrangements of this kind.

The CHAIRMAN. I think without going in and burdening the record with details, we do have this letter from 3 years ago in response to certain questions. What I was trying to make clear is whether or not the Department's position on this matter—would the answer be different today.

Mr. TURNER. I would not think so, sir; no.

The CHAIRMAN. Well, you take a look at them, and if you think so, you can put them in the record.

Mr. TURNER. As I said, I have read the letter and all I say is I would make a somewhat more complete answer. I think, in other words, my statement and Mr. Loevinger's statements are not inconsistent. I would consider mine an amplification of some issues which weren't fully put to him, I don't think, at that time.

The CHAIRMAN. Of course, all of this gets down to a simple question. The Department of Justice has never in my time in Congress agreed to any change, any amendment to the antitrust laws that I know of. They were passed some years ago and changing conditions might give a little justification to the thought that maybe they do not quite apply now as we intended at the time we passed them.

But I admire your persistence. [Laughter].

Mr. TURNER. Well, I guess everybody likes to consider himself as a guardian of the public interest. I might add, however, in response to this latter statement, I recently signed the Special Committee on Telecommunications Report recommending to the Congress the Federal Communications Commission's authority to approve mergers in international telecommunications field, that they be granted authority which they do not have and which would carry antitrust immunity.

The CHAIRMAN. What we are trying to evaluate here is whether or not exemptions to antitrust law would produce results that original antitrust laws intended to produce anyway, or whether it would not. Sometimes there may be some justification, technologically, or advancement of industry, that maybe would warrant changes.

Mr. TURNER. I would like to say that what we are really saying is that all legitimate consideration, bearing on the appropriateness of arrangements of this kind are in fact taken into account applying the antitrust laws, and it has not been demonstrated to us as yet that there are situations in which a restriction that we feel would violate the antitrust laws would in fact be so much in the public interest that the Power Commission ought to be able to immunize it. That is really what our position is.

The CHAIRMAN. Congress has to make a decision whether or not you can handle this situation—this very complex situation—better than the Federal Power Commission. Isn't it as simple as that?

Mr. TURNER. If you put it that way, my response would be—

The CHAIRMAN. I don't think we are letting you out, I think even if this bill were passed as it is written, some amendments, some good ones have been suggested, and I still think that you have a very important role in this thing.

Mr. TURNER. You can rest assured, Mr. Chairman, that if this bill passed, we would certainly be making our appearances in these cases.

The CHAIRMAN. I know the Department has been very helpful on merger cases when we transferred part of this to the ICC and I think this is a question for Congress to decide.

And thank you very much. We appreciate it.

(The following material was subsequently submitted:)

DEPARTMENT OF JUSTICE,
Washington, July 22, 1966.

Hon. WARREN G. MAGNUSON,
Chairman, Committee on Commerce,
U.S. Senate, Washington, D.C.

DEAR Mr. CHAIRMAN: In response to your request for further information, I should like to add the following to my testimony on S. 3136:

First, you referred to a paragraph in my testimony stating "the Bureau of the Budget advises that while there is no objection to the submission of this report it believes that the subject matter of the bill has far-reaching implications, that it requires further intensive study, and that the need for such legislation has not yet been demonstrated." You wished to know who discussed this bill with the Budget, who in the Budget agreed to this paragraph and whether or not the Bureau looked at the bill.

Under established procedures we forwarded our proposed testimony to the Bureau of the Budget for advice as to the relationship of that testimony and the bill to the Administration's program. The above-quoted advice was received from the Bureau in the Office of the Deputy Attorney General Ramsey Clark, as is customary, and was included in my statement as is done in such cases under prescribed procedures.

The Bureau informs us that the advice was based on consideration of the legislation and the background facts and the differing points of view expressed in the various agency reports, that similar advice was given to several other agencies and included in their reports, and that the Assistant Director for Legislative Reference, Wilfred H. Rommel, authorized it. The Bureau was not asked by the Committee to report on the bill.

Second, you asked how many of the 19 power pools mentioned on page 5 of my statement requested advice under the Antitrust Division's business review procedure. None of the power companies involved in these pools used this procedure. This fact reinforces our belief that companies have not been deterred from forming or joining pools because of uncertainty as to the meaning of the antitrust laws.

Third, you asked whether the current position of the Antitrust Division concerning the legality of various agreements by power companies differs from that expressed by former Assistant Attorney General Lee Loevinger in his letter to the Legal Advisory Committee to the National Power Survey dated June 7, 1963. As I pointed out in my testimony, while I believe the statements made in the letter are accurate, some amplification of the views expressed there may be helpful. In particular, Mr. Loevinger indicated that approval of an agreement by the Power Commission would not be sufficient to protect the agreement from attack under the antitrust laws. Strictly speaking, this is true, for without statutory authority, a regulatory commission may not grant antitrust immunity. As a practical matter, however, the Power Commission's reaction to an agreement may play an important role in determining the enforcement policy of the Department of Justice. As I indicated in my prepared statement, reasonable agreements are not unlawful and the views of the Power Commission would be of considerable help in determining whether an agreement is reasonable or unreasonable.

Yours sincerely,

DONALD F. TURNER,
Assistant Attorney General, Antitrust Division.

* * * * *

BERNARD M. HOLLANDER, ALLEN E. MCALLESTER, RAYMOND W. PHILIPPS,
DEPARTMENT OF JUSTICE, ANTITRUST DIVISION, 1307 U.S. COURT HOUSE,
LOS ANGELES, CALIFORNIA 90012, TELEPHONE: 688-2500.

U.S. DISTRICT COURT CENTRAL DISTRICT OF CALIFORNIA

(Civil Action No. 69-75-JWC—Filed: September 11, 1969 (Final Judgment
Entered 10/29/69))

UNITED STATES OF AMERICA, PLAINTIFF,

v.

AUTOMOBILE MANUFACTURERS ASSOCIATION, INC; GENERAL MOTORS CORPORATION;
FORD MOTOR COMPANY; CHRYSLER CORPORATION; AND AMERICAN
MOTORS CORPORATION, DEFENDANTS.

STIPULATION FOR ENTRY OF CONSENT JUDGMENT

It is stipulated by and between the undersigned parties, by their respective attorneys, that:

(1) The parties consent that a Final Judgment in the form hereto attached may be filed and entered by the Court at any time after the expiration of thirty (30) days following the date of filing of this Stipulation without further notice to any party or other proceedings, either upon the motion of any party or upon the Court's own motion, provided that plaintiff has not withdrawn its consent as provided herein;

(2) The plaintiff may withdraw its consent hereto at any time within said period of thirty (30) days by serving notice thereof upon the other parties hereto and filing said notice with the Court;

(3) In the event plaintiff withdraws its consent hereto, this Stipulation shall be of no effect whatever in this or any other proceeding and the making of this Stipulation shall not in any manner prejudice any consenting party in any subsequent proceedings.

U.S. DISTRICT COURT CENTRAL DISTRICT OF CALIFORNIA
(Civil Action No. 69-75-JWC—Entered: October 29, 1969)

UNITED STATES OF AMERICA, PLAINTIFF,

v.

AUTOMOBILE MANUFACTURERS ASSOCIATION, INC.; GENERAL MOTORS CORPORATION; FORD MOTOR COMPANY; CHRYSLER CORPORATION; AND AMERICAN MOTORS CORPORATION, DEFENDANTS

FINAL JUDGMENT

The plaintiff, United States of America, having filed its complaint herein on January 10, 1969, and the plaintiff and the defendants by their respective attorneys having severally consented to the entry of this Final Judgment without trial or adjudication of or finding on any issues of fact or law herein and without this Final Judgment constituting evidence or an admission by any of them in respect to any such issue;

Now, Therefore, before any testimony has been taken and without trial or adjudication of or finding on any issue of fact or law herein, and upon consent of the parties as aforesaid, it is hereby

Ordered, adjudged and decreed as follows:

This Court has jurisdiction of the subject matter herein and of the parties hereto. The complaint states a claim upon which relief may be granted against the defendants under Section 1 of the Act of Congress of July 2, 1890, entitled "An Act to protect trade and commerce against unlawful restraints and monopolies," commonly known as the Sherman Antitrust Act, as amended.

II

As used in this Final Judgment:

(A) "Devices" means air pollution emission control designs, devices, equipment, methods, or parts thereof, for motor vehicles.

(B) "Restricted information" means all unpublished information of the type usually classified as company confidential concerning applied as distinguished from basic research in, or concerning the development, innovation, manufacture, use, sale or installation of Devices. It includes trade secrets, unpublished company policy, and other unpublished technical information for developing, making, improving, or lowering the cost of, Devices by a motor vehicle manufacturer. "Restricted information" shall not mean (i) information concerning basic research in gaining a fuller knowledge or understanding of the presence, nature, amount, causes, sources, effects or theories of control of motor vehicle emissions in the atmosphere, or (ii) information relating primarily to equipment, methods or procedures for the testing or measurement of Devices, or (iii) information for or resulting from the testing or measurement of production prototypes of Devices of an advanced stage exchanged solely for such purposes. Information shall be deemed to be published when it is disclosed without restriction to the public, or to media of general circulation, or to the trade press, or to meetings of stockholders, dealers, or financial analysts, or to meetings of professional, scientific or engineering societies, or committees thereof, the membership of which is not limited to persons employed by defendants or by motor vehicle manufacturers, or to meetings called by representatives of Federal, state or local governments or agencies authorized to issue motor vehicle emission control regulations.

III

The provisions of this Final Judgment shall be binding upon each defendant and upon each of its subsidiaries, officers, directors, agents, servants, employees, successors and assigns, and upon all other persons in active concert or participation with any of them who shall have received actual notice of this Final Judgment by personal service or otherwise, but shall not apply to any transaction between or among a parent company, its subsidiaries, officers, directors, agents, servants and/or employees. Nothing in this Final Judgment shall have any effect with respect to any activities outside the United States which do not adversely and substantially affect the foreign commerce of the United States.

(A) Each defendant is enjoined and restrained from:

(1) Combining or conspiring to prevent, restrain or limit the development, manufacture, installation, distribution or sale of Devices;

(2) Entering into, adhering to, enforcing or claiming any rights under any provisions of any agreement, arrangement, understanding, plan or program (hereinafter "agreement") with any other defendant or manufacturer of motor vehicles or Devices:

(a) to exchange restricted information;

(b) to cross-license patents or patent rights on Devices which cross-license includes patents or patent rights acquired subsequent to the date of any such cross-license;

(c) to delay installation of Devices or otherwise restrain individual decisions as to installation dates;

(d) to restrict publicity of research and development relating to Devices;

(e) to employ joint assessment of the value of patents or patent rights of any third party relating to Devices;

(f) to require that acquisition of patent rights relating to Devices be conditioned upon availability of such rights to others upon a most-favored-purchaser basis;

(g) to file, in the absence of a written authorization for a joint statement by the agency involved, with any governmental regulatory agency in the United States authorized to issue emission standards or regulations for new motor vehicles or Federal motor vehicle safety standards or regulations, any joint statement regarding such standards or regulations except joint statements relating to (i) the authority of the agency involved, (ii) the draftmanship of or the scientific need for standards or regulations, (iii) test procedures or test data relevant to standards or regulations, or (iv) the general engineering requirements of standards or regulations based upon publicly available information; provided that no joint statement shall be filed which discusses the ability of one or more defendants to comply with a particular standard or regulation or to do so by a particular time, in the absence of a written agency authorization for such a joint statement, and provided also that any defendant joining in a joint statement shall also file a statement individually upon written request by the agency involved; or

(h) not to file individual statements with any governmental regulatory agency in the United States authorized to issue emission standards or regulations for new motor vehicles or Federal motor vehicle safety standards or regulations.

(B) Nothing in this Final Judgment shall prohibit any defendant:

(1) from furnishing or acquiring any restricted information for the defense or prosecution of any litigation or claim;

(2) from entering into or performing under any otherwise lawful agreement with any other person or conducting *bona fide* negotiations looking to any such agreement:

(a) for the purchase or sale of specific commercial products;

(b) for the license of specific existing patent rights or from including in any such agreement provision for a nonexclusive grant-back of patent rights on improvements obtained by the licensee during the term of the license or a reasonable period thereafter; or

(c) for the purchase, sale or license of specific existing restricted information or specific engineering services relating to Devices or from including in any such agreement provision for a nonexclusive grant-back of patent rights on improvements obtained by the licensee during the term of the license or a reasonable period thereafter;

or from furnishing or acquiring any restricted information directly relating thereto:

(3) from entering into, renewing or performing under any otherwise lawful agreement with any nondefendant person, firm or corporation that does not account for more than 2% of world production of motor vehicle passenger car, truck and bus units in the calendar year preceding the entering into or renewing such agreement (See Appendix A); or

(4) from entering into, renewing or performing under any agreement which is submitted in writing to the plaintiff and to which plaintiff consents in writing.

(C) Nothing in Section IV(A)(2)(a) shall prohibit any defendant from engaging in any activity outside the United States reasonably necessary:

(1) to the development of, response to, or compliance with existing or proposed vehicle emission laws, regulations or standards of a foreign governmental body, or

(2) to the performance under any otherwise lawful agreement for the production of motor vehicles outside the United States with any person, firm or corporation not engaged in the production of motor vehicles in the United States at the time of entering into or renewing such agreement.

V

(A) Each manufacturing defendant is ordered and directed to exercise its right to withdraw from the AMA cross-licensing agreement of July 1, 1955, as amended, and to take such steps as are necessary to accomplish said withdrawal within one hundred twenty (120) days from the date of entry of this Final Judgment. Notwithstanding such withdrawal defendants may continue to exercise those rights and claims relating to royalty-free licenses under the cross-licensing agreement which have accrued up to the date of entry of this Final Judgment.

(B) Defendant AMA is ordered and directed to relinquish its responsibilities under the AMA cross-licensing agreement of July 1, 1955, as amended, within sixty (60) days from the date of entry of this Final Judgment.

VI

(A) Upon written request therefor and subject to the conditions set forth herein:

(1) Each manufacturing defendant is ordered and directed to grant to any person to the extent that it has the power to do so a nonexclusive, non-transferable and royalty-free license to make, have made, use, lease or sell Devices under any claim of any United States patent or any United States patent application owned or controlled by said defendant or under which it has sublicensing rights, which patent was issued or application was filed prior to the date of entry of this Final Judgment and licensed under the AMA cross-licensing agreement of July 1, 1955, as amended, provided that if the manufacturing defendant is obligated to pay royalties to another on the sales of the licensee the license under this paragraph may provide for the payment of those same royalties to the defendant;

(2) Each manufacturing defendant shall grant to any licensee under (1) above, to the extent that it has the power to do so, an immunity from suit under any foreign counterpart patent or patent application for any product manufactured in the United States under the license for sale abroad or for any product manufactured abroad and sold in the United States, provided that if the manufacturing defendant is obligated to pay royalties to another on the sales of the licensee the license may provide for the payment of those same royalties to the defendant; and

(3) Defendant AMA is ordered and directed to make available for examination and copying by any person the technical reports in its possession or control prepared or exchanged by defendants pursuant to said cross-license within two years prior to the entry of this Final Judgment, which are identified in Appendix B.

(B) Any existing licensee of any manufacturing defendant shall have the right to apply for and receive a license or licenses under this Final Judgment in substitution for its existing license or licenses from any manufacturing defendant, insofar as future obligations and licenses are concerned. Any licensee shall be free to contest the validity and scope of any licensed patent.

VII

Defendant AMA is ordered and directed to mail a copy of this Final Judgment to all signatories to the AMA cross-licensing agreement of July 1, 1955, as amended, and to all known domestic manufacturers of motor vehicles and motor vehicle engines within thirty (30) days from the date of entry of this Final Judgment, and to issue a press release to the domestic trade and business press relating the substance of the Final Judgment.

VIII

For the purpose of determining or securing compliance with this Final Judgment, duly-authorized representatives of the Department of Justice shall, upon written request of the Attorney General, or the Assistant Attorney General in charge of the Antitrust Division, and on reasonable notice to any defendant made

to its principal office, be permitted, subject to any legally recognized privilege, access during the office hours of said defendant to all books, ledgers, accounts, correspondence, memoranda, and other records and documents in the possession or under the control of said defendant relating to any matters contained in this Final Judgment, and subject to the reasonable convenience of said defendant and without restraint or interference from it, to interview officers or employees of said defendant, who may have counsel present, regarding any such matters. Said defendant, upon the written request of the Attorney General or the Assistant Attorney General in charge of the Antitrust Division, shall submit such written reports with respect to any of the matters contained in this Final Judgment as from time to time may be requested. No information obtained by the means provided in this Section shall be divulged by any representative of the Department of Justice to any person other than a duly authorized representative of the Executive Branch of the plaintiff, except in the course of legal proceedings to which the United States is a party for the purpose of securing compliance with this Final Judgment or as otherwise required by law.

IX

Section IV(A)(2)(a) and (g) of this Final Judgment shall expire ten years after the date of entry hereof, provided that plaintiff may apply to this Court for the continuation of one or both of said provisions, such application to be made not later than nine years after the date of entry of this Final Judgment.

X

Jurisdiction of this cause is retained for the purpose of enabling any of the parties to this Final Judgment to apply to this Court at any time for such further orders and directions as may be necessary or appropriate in relating to the construction of or carrying out of this Final Judgment, for the modification or vacating of any of the provisions thereof, and for the purpose of the enforcement of compliance therewith and the punishment of violations thereof.

Dated: October 29, 1969.

JESSE W. CURTIS,
U.S. District Judge.

Section IV(B)(3) of this judgment was prepared in reliance on the motor vehicle production statistics set forth in the following tables contained in Ward's 1969 Automotive Yearbook (31st edition) published by Powers and Company, Inc., Detroit, Michigan, at page 14:

1968 WORLD MOTOR VEHICLE PRODUCTION (20 LEADING COUNTRIES)

	Passenger cars	Trucks and buses	1968 total	1967 total
United States	8,843,031	1,950,713	10,793,744	8,992,269
Canada	900,527	277,649	1,178,176	943,992
Subtotal	9,743,558	2,228,362	11,971,920	9,936,261
Japan	2,055,821	2,030,005	4,085,826	3,146,486
West Germany	2,535,433	571,525	3,106,958	2,482,319
United Kingdom	1,815,000	409,300	2,224,300	1,937,119
France	1,833,047	242,570	2,075,617	2,009,672
Italy	1,544,933	118,716	1,633,649	1,542,669
Argentina	127,965	53,011	180,976	175,318
Australia	340,000	75,000	415,000	390,119
Austria	2,200	2,350	4,550	4,383
Brazil	158,863	118,371	277,234	225,300
India	37,000	41,000	78,000	69,000
Netherlands	60,000	7,000	67,000	56,566
Mexico	102,907	37,192	140,099	123,751
Poland	40,500	39,600	80,100	61,400
Spain	311,531	81,902	393,433	362,906
Sweden	223,330	21,361	244,691	214,560
Czechoslovakia	126,000	50,200	176,200	164,000
Yugoslavia	50,400	13,680	64,080	60,000
U.S.S.R.	250,000	550,000	800,000	728,900
Subtotal	11,614,930	4,462,783	16,077,713	13,754,468
Grand total	21,358,488	6,691,145	28,049,633	23,690,729

Note: Data for above tabulation drawn from best sources available. Statistics for some Red-bloc countries based upon monthly averages and are subject to slight change. U.S.S.R. for 1968 is an estimate based upon final 1967 counts.

WORLD MOTOR VEHICLE PRODUCTION—1969 (26 LEADING MANUFACTURERS)

Ranking and manufacturer	Country	Cars	Trucks	Total, 1968	Total, 1967
1 GM.....	United States...	4,592,077	828,978	5,421,055	4,798,301
2 Ford.....	do.....	2,396,924	623,272	3,020,196	2,122,841
3 Chrysler.....	do.....	1,585,591	173,769	1,759,360	1,505,561
4 Volkswagen.....	West Germany...	1,448,533	100,400	1,548,933	1,162,258
5 Fiat.....	Italy.....	1,301,751	89,470	1,391,221	1,312,215
6 Toyota.....	Japan.....	659,189	438,216	1,097,405	832,130
7 BLM.....	England.....	807,067	179,204	986,271	646,318
8 Nissan.....	Japan.....	571,614	408,220	979,834	726,067
9 Renault.....	France.....	731,000	76,000	807,000	777,468
10 British Ford.....	England.....	553,701	108,017	661,718	526,987
11 Opel (GM).....	West Germany...	646,718	10,000	656,718	549,281
12 Toyota Kogyo.....	Japan.....	178,115	282,994	461,109	383,323
13 Citroen.....	France.....	383,000	77,600	460,600	500,030
14 Ford.....	Canada.....	287,286	157,815	445,101	295,779
15 GM.....	do.....	338,016	86,288	424,304	384,919
16 Peugeot.....	France.....	377,725	29,980	407,705	405,314
17 Mitsubishi.....	Japan.....	130,253	229,723	259,976	317,378
18 GM Vauxhall.....	England.....	244,918	97,222	342,140	290,706
19 Ford Cologne.....	West Germany...	306,232	28,923	335,155	396,646
20 Honda.....	Japan.....	186,560	132,257	318,817	149,289
21 Chrysler Simca.....	France.....	317,248	0	317,248	248,574
22 Daimler-Benz.....	West Germany...	216,000	68,837	284,837	254,138
23 AM Corp.....	United States...	268,439	0	268,439	229,058
24 D. Kogyo.....	Japan.....	89,296	171,059	260,355	225,490
25 Chrysler.....	Canada.....	219,151	16,573	235,724	202,812
26 Chrysler Rootes.....	England.....	189,102	27,066	216,168	203,312

Note: Because both production and factory sales are used in the above tabulation, the above rankings are not absolute and could vary slightly. Data used represents vehicles produced in the indicated locations. Fiat excludes Autobianchi. Volkswagens excludes Auto-Union. BLM was formed in 1968, hence its 1967 total represents BMC.

It is contemplated by the parties that Ward's Automotive Yearbook or any successor publication will be the source of the statistics necessary to the future interpretation of the provisions of Section IV(B)(3).

Pursuant to Section VI(A)(3) of the Final Judgment the following technical reports are identified:

SUBCOMMITTEE REPORTS TO THE VEHICLE COMBUSTION PRODUCTS COMMITTEE,
JANUARY 1968

1. Atmospheric Chemistry Panel Report

2. Diesel Emission Panel Report

(a) Proposed Standards for Motor Vehicle Exhaust Odor and Irritation—California Department of Public Health Bureau of Air Sanitation—March 1, 1966—8 pages

(b) Proposed Additions to the California Administrative Code—Standards for Motor Vehicle Emissions, State Board of Public Health Meeting June 10, 1966—prepared by the State of California Department of Public Health—May 4, 1966—6 pages

3. Ad Hoc Engine Deposits Panel Report

(a) A Proposed Program to Establish the Effect of Combustion Chamber Deposits on Exhaust Emissions—prepared by Engine Deposit Panel—January 3, 1967—19 pages

(b) Proposed Joint AMA-API Engine Deposits Program—September 14, 1967—7 pages

4. Engine and Vehicle Modification Panel Report.

5. Exhaust Emission Measurement Panel Report.

(a) EEMP—Status Report on Future Exhaust Emission Standards—undated—8 pages.

6. Ad Hoc Group on Exhaust System Heat Report.

7. Fuel System Emission Panel Report.

(a) FSEP—Report of Fuel System Emission Panel to VPC—July 20, 1967—9 pages.

(b) AMC Evaporation Systems—undated—6 pages.

(c) Chrysler Closed Vent System—C.V.S.—prepared by Chrysler—undated—8 pages.

(d) Crankcase Storage of Evaporative Emissions—prepared by General Motors Corp.—October 25, 1967—9 pages.

- (e) Charcoal Canister Evaporative Emission Control System—prepared by General Motors Corp.—October 25, 1967—9 pages
- (f) History of Evaporative Control Studies—prepared by Ford Motor Company—December 1, 1967—12 pages
- (g) Crankcase Storage System for Control of Fuel Evaporative Emissions—prepared by Ford Motor Company—December 1, 1967—14 pages
- (h) Carbon Air Cleaner Evaporative Control System—prepared by Ford Motor Company—December 1, 1967—9 pages
- 8. Ad Hoc Health Committee Report
- 9. Heavy Vehicle Panel Report
 - (a) Differences between California and HEW Truck Test Cycles—prepared by Heavy Truck Panel—June 6, 1967—3 pages
- 10. New Devices Committee Report
- 11. Ad Hoc Traffic Survey Panel Report
 - (a) Comparison of General Durability Schedules—prepared by Ad Hoc Traffic Survey Panel—undated—1 page
- 12. Vehicle Emission Surveillance Panel Report
 - (a) Analysis of California Surveillance Data—prepared by the Auto Club of Southern California and Scott Research Laboratories—dated April 20, 1967—8 pages

SUBCOMMITTEE REPORTS TO THE VEHICLE COMBUSTION PRODUCTS COMMITTEE,
MAY 23, 1986

- 1. Atmospheric Chemistry Panel Interim Report
- 2. Engine and Vehicle Modification Panel Interim Report
- 3. Exhaust Emission Measurement Panel Interim Report
 - (a) State of California Air Resources Board—Specification for Simplified Instrument Console for Emission Measurements—13 pages—December 27, 1967
 - (b) State of California Air Resources Board—Test Procedure for Approval of Instruments for Garages, Vehicle Assembly Line and Field Station Use—March 6, 1968—8 pages
- 4. Fuel System Emission Panel Interim Report
 - (a) Laboratory Crossecheck Charts—undated—5 pages
- 5. Heavy Vehicle Panel Interim Report
 - (a) 1969 California Exhaust Emission Standard and Test Procedure for Heavy Trucks contained in the Federal Register publication of January 4, 1968—23 pages
- 6. Ad Hoc Traffic Survey Panel Interim Report
 - (a) Considerations in Traffic Survey and Test Cycle Development—NCAPC Meeting of March 29, 1968—prepared by the Ad Hoc Traffic Survey Panel—April 5, 1968—2 pages
- 7. Vehicle Emission Surveillance Panel Interim Report
 - (a) Hot vs. Cold Start Surveillance Testing—prepared by VESP—March 27, 1968—2 pages
 - (b) VESP Future Surveillance Program—undated—2 pages
 - (c) Summary of Analysis—undated—5 pages
 - (d) VESP reply letter (draft) to Mr. John Raymond of CMVPCB—May 7, 1968
 - (e) Effect of Tune-Up—undated—2 pages
- 8. Engine and Vehicle Modification Panel Reports
 - (a) 1970 California Evaporative Control Standard and Test Procedure for Passenger Cars contained in the Federal Register of January 4, 1968—23 pages
 - (b) Intake Valve Throttling (IVT)—A Sonie Throttling Intake Valve Engine—prepared by General Motors for the SAE meeting—May 20-24, 1968—11 pages
 - (c) EVMP—Present Status of Steam Power for Road Vehicles—May 8, 1968—11 pages
 - (d) Preliminary Test Results with Non-Flame After Burner Exhaust Manifold F4-134 cu. in. Engine—prepared by KAISER Jeep CORPORATION—May 8, 1968—5 pages
 - (e) Ad Hoc Subpanel—Valve Timing Proposal Submitted to EVMP—April 9, 1968—2 pages

SUBCOMMITTEE REPORTS TO THE VEHICLE COMBUSTION PRODUCTS COMMITTEE,
SEPTEMBER 27, 1968

1. Atmospheric Chemistry Panel Interim Report
2. Diesel Emission Panel Interim Report
3. Engine and Vehicle Modification Panel Interim Report
 - (a) Report on New Engine Idle Stability—prepared by EVMP members—September 10, 1968—18 pages
 - (b) Drivability Procedure—August 6, 1968—8 pages
 - (c) Vehicle Inspection Procedure for Emission Control Systems and Devices, Gasoline Powered Vehicles—Inspection Old Format—August 1, 1967—5 pages Inspection—New Format—5 pages
 - (d) Mass Flow Data—prepared by Chrysler Corporation—September 10, 1968—11 pages
 - (e) EVMP Panel Report on 1968 Engine Idle Setting Procedures—July 10, 1968 Revision including Shop Manual Instructions Furnished by several member companies
 - (f) EVMP Valve Timing Proposal—undated—2 pages
 - (g) Excerpt from EVMP Memorandum Report dated June 11, 1968 on Catalytic Converters and Afterburners—1 page
 - (h) Catalytic Converters for Emission Control—prepared by Toyota Motor Company—August 6, 1968—8 pages
 - (i) Ceramic Exhaust Manifold Reactors—prepared by Ford Motor Company—August 5, 1968—7 pages
4. Exhaust Emission Measurement Panel Interim Report
 - (a) Status Report on Assembly Line Testing by EEMP—August 5, 1968—2 pages
 - (b) Report on Measurement Procedure for Nitric Oxide for California—1970 by EEMP—August 5, 1968—16 pages
 - (c) Report on Exhaust Emission Reactivity Criterion from the Atmospheric Chemistry Panel and the EEMP—July 30, 1968—6 pages
 - (d) Proposal—Exhaust Emission Correlation Program HEW—AMA Laboratories—prepared by EEMP Panel member—October 24, 1967—4 pages
 - (e) Fast Response Flame Ionization Instrument—letter prepared by Chrysler Corporation—dated June 19, 1968—2 pages
 - (f) Bay Toll Crossing Letter—answer sent to Mr. E. R. Foley by Mr. Sherman—August 21, 1968 with attachments—7 pages
5. Fuel System Emission Panel Interim Report
 - (a) Fuel System Emission Panel report on Proposed Test Procedure for the Determination of Liquid Fuel Losses from Vehicle Fuel Tanks—September 27, 1968—8 pages
 - (b) Fuel System Emission Panel report on Proposed Program for Circulation and Cross-Check of 1970 Evaporative Cars—September 27, 1968—2 pages
6. Heavy Vehicle Panel Interim Report
 - (a) Recommended Application Procedure for Certification of New Gasoline Engines for Use in Heavy Duty Vehicles 1970 Model Year—prepared by the National Air Pollution Control Administration—dated September 23, 1968—19 pages
7. Ad Hoc Traffic Survey Panel Interim Report
8. Vehicle Emission Surveillance Panel Interim Report

SUBCOMMITTEE REPORTS TO THE VEHICLE COMBUSTION PRODUCTS COMMITTEE,
DECEMBER 10, 1968

1. Atmospheric Chemistry Panel Interim Report
2. Engine & Vehicle Modification Panel Interim Report
 - (a) Driveability Demonstration—prepared by the Driveability Subpanel of EVMP—November 4, 1968—14 pages
 - (b) Summary—1969 Emission Control Systems as presented by the companies to the Engine and Vehicle Modification Panel—undated—12 pages
 - (c) Comments to ESC by the EVMP on the Feasibility of a Two Minute Emission Inspection System—October 14, 1968—3 pages
 - (d) AMA Recommendations in *AMA Inspection Handbook*, Section IX, Vehicle Control Systems—5 pages—dated September 10, 1968
 - (e) Report of visit to New Jersey Inspection Station November 21, 1968—by the EVMP—7 pages.

- (f) Comments to ESC from EVMP on California Proposals for Emission Control Standards on 1970 and Later Model Vehicles—October 21, 1968—5 pages.
3. Exhaust Emission Measurement Panel Interim Report.
 - (a) EEMP comments and Recommendations to AMA ESC on California AB 357 Requirements for Assembly Line Testing for Vehicle Emissions—December 2, 1968—10 pages.
 - (b) Letter from EEMP of September 6, 1968 to Mr. K. D. Mills at Willow Run and Mr. Mills answer of October 14, 1968 re AMA Exhaust Emission Measurement Correlation Program.
 - (c) Fuel System Emission Panel and Heavy Vehicle Panel report to the Emission Standards Committee on Measuring Evaporative Losses—undated—4 pages.
 - (d) Recommended Application Procedure for Certification of New Gasoline Engines for Use in Heavy Duty Vehicles—1970 Model Year—prepared by National Air Pollution Control Administration—September 23, 1968—19 pages.
 4. Fuel System Emission Panel Interim Report.
 5. Heavy Vehicle Panel Interim Report.
 6. Ad Hoc Traffic Survey Panel Interim Report.

SUBCOMMITTEE REPORTS TO THE VEHICLE COMBUSTION
PRODUCTS COMMITTEE, MARCH 27, 1969

1. Engine & Vehicle Modification Panel Interim Report
2. Exhaust Emission Measurement Panel Interim Report
 - (a) Report from Exhaust Emission Measurement Panel on California ARB proposed Assembly Line Test Procedure for Motor Vehicle Exhaust—January 28, 1969—6 pages
 - (b) Effect of Engine Intake Air Moisture on Nitrogen Oxides Emissions—prepared by Ethyl Corporation, March 14, 1969—23 pages
 - (c) Humidity Correction K Factor—prepared by Nissan Motor Company—undated—16 pages
 - (d) Mass Emission Test Procedures—undated—4 pages
 - (e) Effect of Fuel Composition (% Aromatics) on Exhaust Hydrocarbon Concentration—Based Upon DuPont data and a Report by GM dated January 22, 1969—5 pages.
 - (f) Report on Measurement Procedure for Nitric Oxide for California—1970—prepared by EEMP—August 5, 1968—16 pages.
 - (g) Critique—California AB 690 Test Method for Measuring Vehicle Exhaust Emissions on a Mass Basis—undated—4 pages.
3. Fuel System Emission Panel Interim Report.
4. Health Committee Interim Report.
5. Heavy Vehicle Panel Interim Report.
6. Ad Hoc Traffic Survey Interim Report.

SUBCOMMITTEE REPORTS TO THE VEHICLE COMBUSTION PRODUCTS COMMITTEE,
JUNE 19, 1969

1. Heavy Vehicle Panel Interim Report
2. Atmospheric Chemistry Panel Interim Report
 - (a) Exhaust Emission Reactivity Criterion—prepared by the Atmospheric Chemistry Panel and the EEMP—May 28, 1969—6 pages
3. Vehicle Emission Surveillance Panel Interim Report
 - (a) Surveillance Data Summary—prepared by VESP—June 9, 1969—5 pages
4. Exhaust Emission Measurement Panel Interim Report
 - (a) Proposed Items of Discussion on May 12, 1969 at Willow Run—Prepared by Messrs. Mick, Fagley, and Hagen—8 pages
 - (b) Analysis of AMA data for HC Emissions during the Federal Cycle—prepared by Ethyl Corporation—June 2, 1969—8 pages
 - (c) Analysis of AMA data for HC Emissions during the California Cycle Tests—Changes to improve Response Time—prepared by Chrysler Corporation—April 29, 1969—3 pages
 - (d) Proposal Exhaust Emission Correlation Program HEW—AMA Laboratories—prepared by Ford Motor Company—April 7, 1969—4 pages

5. Engine & Vehicle Modification Panel Interim Report.

(a) Transmission Controlled Spark—An evaluation of NO_x Emissions—prepared by General Motors Corporation—April 15, 1969—10 pages

(b) Presentation on the Effect of Valve Overlap on Oxides of Nitrogen Emissions—prepared by General Motors Corporation—undated—6 pages

(c) IH Spark Advance Monitoring System—prepared by International Harvester Company—March 5, 1969—4 pages

(d) Performance of a Catalytic Converter on Non-leaded Fuel prepared by General Motors Corporation and published in SAE—undated—13 pages

(e) Comments on Performance of a Catalytic Converter on Non-leaded Fuel—prepared by Ford Motor Co.—presented before the SAE mid Year Meeting May 22, 1969—18 pages

(f) Panel Charge—prepared by J. P. Charles—dated May 27, 1969—1 page

(g) Engine Tune-up Data for 1970 Year Model Toyota Vehicles—prepared by Toyota Motor Company dated June 10, 1969—2 pages

(h) Engine Idle Setting Procedure—prepared by Kaiser Jeep Corporation—undated—1 page

(i) Committee Correspondence re New Jersey Vehicle Emission Inspection—dated April 7th, May 8th, June 9th, 1969 describing telephone conversation with Mr. Elston.

(j) Inspection Handbook Distribution—dated June 4, 1969.

(k) Quality Car Care Schedule—prepared by Toyota Motor Company—undated—3 pages.

(l) Layman's Nomenclature—undated—2 pages.

6. Fuel System Emission Panel Interim Report:

(a) Laboratory Cross-Check Program—prepared by Fuel System Emission Panel—May 5, 1969—11 pages.

(b) Fuel Tank Heating Methods—prepared by Fuel System Emission Panel—May 5, 1969—22 pages.

(c) Emission Control Calculations on Total Motor Vehicle HC & CO Emissions—dated June 17, 1969—3 pages

ADDITIONAL SUBCOMMITTEE REPORTS TO THE VEHICLE COMBUSTION PRODUCTS COMMITTEE (IN PREPARATION AND TO BE COMPLETED BY OCTOBER 31, 1969)

1967 ANNUAL REPORT OF ENGINE AND VEHICLE MODIFICATION PANEL

1. Status Report No. 5 of the Engine & Vehicle Modification Panel to the Vehicle Combustion Products Committee—1967—27 pages

2. Tables I and II on 6 Cylinder and 8 Cylinder Camshafts

Figure 1—American Motors Report on 6 Cylinder Camshafts—1 page

Figure 2—Field Survey of Combustion Testers

Figure 3—Response to Exhaust Gas with and without Air Injection using a Johnson-Williams Combustibles Analyzer

Figure 4—Variable Dilution System—Exhaust Gas (missing)

Figure 5—Blow-by Emission Measurement—prepared by New Jersey State Department of Health

Figure 6—1968 Engine Information Decals

Figure 7—Cross Section of 199 C.I.D. Combustion Chamber—Quench and Low Quench

Figure 8—Cross Section of 232 C.I.D. Combustion Chamber—Quench and Low Quench

Figure 9—Head Gasket Bore Configuration user with Low Quench Engines 199 and 323 C.I.D.

Figure 10—Effect of Air-Fuel Ratio on Exhaust NO Concentrations for Various Speed-Load Combinations.

Figure 11—Effect of Spark Timing on Exhaust NO Concentrations for Various Speed-Load Combinations.

Figure 12—Effect of Intake Manifold Vacuum on Exhaust NO Concentrations for Various Air-Fuel Ratios.

Figure 13—Effect of Coolant Temperature on Exhaust NO Concentrations for Duplicate Runs.

3. Appendices:

(A) Camshaft and Valve Timing—EVMTG Proposal.

(B) Proposed AMA Engine Idle Setting Procedures—EVMPTG June 27, 1967.

(C) Reply to New Jersey Regarding State Vehicle Inspection by VCP—November 10, 1967.

- (D) Reply to Air Pollution Control Administration—December 22, 1966
 (E) Bibliography of Papers on Emission Control Devices Submitted to EVMP by Member Companies

1968 ANNUAL REPORT OF ENGINE & VEHICLE MODIFICATION PANEL

1. Status Report No. 6 of the Engine and Vehicle Modification Panel to the Vehicle Combustion Products Committee—1968—23 pages

2. Appendices:

- (A) Control of Oxides of Nitrogen—Chrysler Study Curves, data, and Sketches illustrating Chrysler Studies in NO_x control.
 (B) Exhaust System Devices for Emission Control—International Harvester Company
 (C) Vehicle Inspection Procedures
 (D) 1969 Emission Control Systems
 (E) Mass Flow
 (F) Idle Setting Procedures—A detailed description of the shop manual procedures for each manufacturer
 (G) Manifold Reactors—Preliminary Test Results with Non-Flame After Burner Exhaust Manifold, F4-134 cu. in. Engine
 (H) Air Injection Modifications—Toyota Motor Co., Ltd. Nippon Denso Co., Ltd.
 (I) Steam-Powered Road Vehicles—Present Status
 (J) Valve Timing Proposal
 (K) Driveability—Driveability Demonstration
 (L) Comments on California 1970 Proposals

ENGINE AND VEHICLE MODIFICATION PANEL REPORTS

Date of presentation	Subject	Prepared by	Number of pages
1. Oct. 17, 1967	Combustion chamber quench charges, 1968 models.	Chrysler Corp.	1
2. Oct. 17, 1967	1968 Ford emissions systems.	Ford Motor Co.	1
3. Oct. 17, 1967	Idle adjustments.	Chrysler Corp.	1
4. Oct. 17, 1967	Idle mixture, effect of miles on idle speed, and timing changes.	General Motors Corp.	3
5. Oct. 17, 1967	Emission control by engine design and development.	American Motors Corp.	17
6. Nov. 15, 1967	New Jersey emissions inspection program.	EVMP.	10
7. Nov. 17, 1967	Engine idle-setting procedures.	American Motors, Chrysler Corp., Ford Motor Co., General Motors Corp., International Harvester Co., Kaiser Jeep Corp.	37
8. Dec. 5, 1967	Changes in idle speed remixture.	Ford Motor Co.	2
9. Dec. 5, 1967	Emission-control labels.	Kaiser Jeep Corp.	1
10. Dec. 5, 1967	AMA-HEW exhaust-flow equations.	EVMP.	5
11. Jan. 2, 1968	Idle service instructions—CAS.	Chrysler Corp.	1
12. Jan. 2, 1968	Exhaust volume measurements on cycle tests.	do.	1
13. Dec. 5, 1967	Survey of emission control devices in use on 1968 models.	American Motors, Chrysler Corp., Ford Motor Co., General Motors Corp.	17
14. January 1968	Exhaust emission control devices.	Kaiser Jeep Corp.	2
15. Jan. 4, 1968	Idle mixture, speed and spark timing adjustments.	General Motors Corp.	6
16. Jan. 2, 1968	Exhaust system devices for emission control.	International Harvester Co.	1
17. Jan. 2, 1968	Exhaust manifold reactors.	do.	3
18. Jan. 2, 1968	Heavy truck emission control systems.	do.	2
19. Dec. 15, 1967	Adjusting idle mixture.	Ford Motor Co.	7
20. Feb. 13, 1968	Changes in idle tune during 1st 1,000 miles 1968 GM cars.	General Motors Corp.	1
21. Feb. 2, 1968	Decal code.	Chrysler Corp.	3
22. Feb. 9, 1968	Test data on catalytic system.	Kaiser Jeep Corp.	3
23. Feb. 13, 1968	Ceramic exhaust manifold reactors.	Ford Motor Co.	4
24. Feb. 13, 1968	Test data exhaust emissions.	Kaiser Jeep Corp.	1
25. Mar 12, 1968	Air control valve to improve running stability after starting on an air injected gasoline engine.	Toyota Motor Co. Ltd., Nippon Denso Co. Ltd.	7
26. Mar 12, 1968	Engines for Toyota 1968 models.	Toyota Motor Co., Ltd.	1
27. Mar 12, 1968	Engine stalling on deceleration.	Nissan Motor Co., Ltd.	7
28. Mar 12, 1968	Surface to volume ratio 4 cylinder vehicle.	Kaiser Jeep Corp.	1
29. Apr 4, 1968	Data on idle stability and exhaust gas volume of Toyota vehicles.	Toyota Motor Co., Ltd.	5
30. Apr 9, 1968	Mass flow data.	Nissan Motor Co., Ltd.	1
31. Apr 4, 1968	Idle settings 4,000 miles or under.	Chrysler Corp.	1

See footnotes at end of table, p. 1695.

ENGINE AND VEHICLE MODIFICATION PANEL REPORTS—Continued

Date of presentation	Subject	Prepared by	Number of pages
32. May 8, 1968	Report on present status with steam powered road vehicles and their emission characteristics.	EVMP	(1234)
33. May 8, 1968	Preliminary test results with nonflame afterburner exhaust manifold F-4—134 cubic inch engine.	Kaiser Jeep Corp	5
34. May 8, 1968	Valve timing proposal submitted to EVMP	Kaiser Jeep Corp., General Motors Corp., Ford Motor Co.	2
35. June 11, 1968	1968 engine idle setting procedures.	American Motors Corp., Chrysler Corp., Ford Motor Co., General Motors Corp., International Harvester Co., Kaiser Jeep Corp., Nissan Motor Co., Toyota Motor Co.	7
36. June 11, 1968	Vehicle inspection procedure for emission control systems and devices, gasoline powered vehicles.	American Motors Corp., Ford Motor Co., General Motors Corp., International Harvester Co., Kaiser Jeep Corp., Toyota Motor Co., Ltd.	5
37. July 10, 1968	1968 idle setting procedures shop manual instructions.	American Motors Corp., Chrysler Corp., Ford Motor Co., General Motors Corp., International Harvester Co., Kaiser Jeep Corp., Nissan Motor Co., Ltd., Toyota Motor Co., Ltd.	35
38. Aug. 6, 1968	Driveability procedure	EVMP	8
39. Aug. 6, 1968	Valve timing proposal.	EVMP	2
40. Aug. 6, 1968	Catalytic converter for emission control	Toyota Motor Co., Ltd.	8
41. Aug. 5, 1968	Ceramic exhaust manifold reactor	Ford Motor Co.	7
42. Aug. 6, 1968	Throttle positioner	Toyota Motor Co., Ltd.	20
43. Aug. 21, 1968	Valve timing	EVMP	2
44. Sept. 10, 1968	Report on new engine idle stability	Ford Motor Co., American Motors Corp., General Motors Corp., Toyota Motor Co., Ltd., Chrysler Corp., International Harvester Co., Nissan Motor Co., Ltd.	25
45. Aug. 27, 1968	Emission inspection presentation to AAMVA on vehicle emission inspection.	ESC Chairman	18
46. Sept. 10, 1968	Mass flow data	Chrysler Corp.	12
47. Aug. 22, 1968	Rating idle quality	International Harvester Co.	8
48. Aug. 16, 1968	Vehicle evaluation rating system	Ford Motor Co.	2
49. Aug. 9, 1968	Idle quality evaluations	American Motors Corp.	2
50. Sept. 7, 1968	Engine idle stability evaluation procedure	Nissan Motor Corp.	2
51. Sept. 10, 1968	Exhaust manifold reactors	International Harvester Co.	4
52. September 1968	do.	Nippon Denso Co., Ltd.	3
53. Oct. 8, 1968	1969 emission control systems.	Toyota Motor Co., Ltd.	2
54. Oct. 10, 1968	AMA driveability demonstration.	EVMP	12
55. Oct. 7, 1968	1969 emission control systems.	American Motors Corp.	1
56. Oct. 8, 1968	1969 Chrysler cleaner air system compared to the 1968 system.	Chrysler Corp.	3
57. Oct. 8, 1968	1969 emission control systems.	Ford Motor Co.	3
58. Nov. 1, 1968	Summary of 1969 GM exhaust emission control systems.	General Motors Corp.	1
59. Nov. 12, 1968	1969 emission control systems.	International Harvester Co.	1
60. January 1969	Exhaust emission control systems.	Kaiser Jeep Corp.	1
61. Dec. 17, 1968	Control systems for 1970	American Motors Corp.	5
62. Dec. 17, 1968	Chrysler 1970 emission controls.	Chrysler Corp.	5
63. Dec. 17, 1968	1970 emission control systems.	Ford Motor Co.	4
64. Dec. 17, 1968	Summary of proposed 1970 emission control systems.	General Motors Corp.	7
65. Dec. 17, 1968	1970 light duty vehicle prototype emission control systems.	International Harvester Co.	11
66. November 1968	Projected vehicle emission control system for Toyota 1970 model vehicles.	Toyota Motor Co., Ltd.	27
67. Dec. 17, 1968	Control of oxides of nitrogen.	Chrysler Corp.	9
68. Dec. 17, 1968	Inspection of emission control systems.	General Motors Corp.	3
69. Dec. 17, 1968	Supplementary information on 1969 emission control systems.	International Harvester Co.	7
70. Jan. 7, 1969	Investigations of NO control systems.	Ford Motor Co.	35
71. Jan. 7, 1969	Oxides of nitrogen from smaller gasoline engine.	Toyota Motor Co., Ltd.	63
72. Jan. 7, 1969	Summary of proposed 1970 emission control systems.	Kaiser Jeep Corp.	5
73. December 1968	The effects of the ignition system on exhaust emissions.	Mitsubishi Electric Corp.	26
74. Mar. 24, 1969	Engine idle quality test procedure of Toyota	Toyota Motor Co., Ltd.	6
75. Mar. 27, 1969	Reduction of nitrogen oxides in automobile exhaust.	Nippon Denso Co., Ltd.	11
76. Mar. 11, 1969	Description of ignition advance monitoring systems.	International Harvester Co.	5

See footnotes at end of table, p. 1695.

ENGINE AND VEHICLE MODIFICATION PANEL REPORTS—Continued

Date of presentation	Subject	Prepared by	Number of pages
77. June 10, 1969	Engine idle setting procedure	Kaiser Jeep Corp.	1
78. May 13, 1969	Quality car care schedule	Toyota Motor Co.	3
79. May 19, 1969	Performance of a catalytic converter on non-leaded fuel SAE paper No. 690503.	General Motors Corp.	10
80. May 22, 1969	Comments by J. H. Jones and E. E. Weaver—Car systems research on SAE paper No. 690503.	Ford Motor Co.	18

EXHAUST EMISSION MEASUREMENT PANEL REPORTS

1. Sept. 8, 1967	A proposal for an interim mass exhaust emission test procedure.	Ford	3
2. Sept. 8, 1967	A proposal for 1970 standards based on mass equivalents.	General Motors	4
3. Sept. 7, 1967	Calculations of exhaust mass emissions.	do.	2
4. Sept. 8, 1967	Interim mass emission test procedure (Sept. 21, 1967) Exhaust Emission Measurement Panel to VCP.	Exhaust Emission Measurement Panel.	8
5. Oct. 25, 1967	Proposal, exhaust emission correlation program for Exhaust Emission Measurement Panel.	Ford	4
6. Nov. 20, 1967	Curves and tables emissions vs. vehicle weight.	Chrysler	17
7. Nov. 20, 1967	Interim mass standards for 1970.	General Motors	4
8. Nov. 20, 1967	Assumptions for 1970 certification based on mass.	Ford	3
9. Nov. 20, 1967	Curves, F ₃ /cycle vs. engine displacement; inertia weight.	American Motors	3
10. Jan. 18, 1968	Exhaust Emission Measurements Panel notes to ESC on HEW standards published Jan. 4, 1968.	Exhaust Emission Measurement Panel.	18
11. Jan. 31, 1968	EEMP proposed revision of Cal. Specs. for Assy. Line Instrument.	EEMP	14
12. Mar. 13, 1968	Computer print-out of best fit equation for Cal. gases.	General Motors	4
13. Do	Propane response.	do.	1
14. Do	FIA of propane Cal. gases using Olson gravimetric standards.	EEMP	1
15. Do	Daimler-Benz response to HEW 1970 standards dated Jan. 4, 1968.	Mercedes-Benz	11
16. Mar. 29, 1968	Considerations in traffic survey and test cycle development.	TSP	3
17. Apr. 17, 1968	Effect of emission control system on reactivity.	Ford	3
18. Do	Relative efficiencies of control systems, table.	Chrysler	1
19. May 9, 1968	Report on variable dilution sampling, Clark	General Motors	8
20. Do	Report on NO _x measurement, Lang	do.	13
21. Do	Production line test—instrument and test procedure.	American Motors and California ARB Staff.	1
22. May 28, 1968	Table, spread between NDIR and FID analyses.	American Motors	2
23. May 28, 1968	Comparison between 7-mode and 10-mode cycle NDIR vs. FID.	International Harvester	5
24. May 28, 1968	Whittaker method of measuring NO _x strip chart.	Chrysler	2
25. May 28, 1968	Proposed answer to Cal. bay toll crossings division.	EEMP	7
26. June 5, 1968	Strip chart of NO measurement using Whittaker method—letter from Whittaker to W. Fagley, Jr.	Chrysler	4
27. July 23, 1968	European consideration of atmospheric pollution problems.	AMA	3
28. July 17, 1968	Comparison of emission reactivities—table 1.	General Motors	1
29. July 17, 1968	Number of hydrocarbons evaluated under controlled conditions.	do.	1
30. July 17, 1968	Graphs plus computer summaries—HC reactivity versus conc. by C. G.	do.	15
31. July 17, 1968	Comparison—HC conc. by C. G. versus FID.	do.	3
32. July 17, 1968	Correlation—reactivity and gas chromatography.	Ford	1
33. July 17, 1968	SAE paper 680419—FID technique—HC in diesel exhaust.	International Harvester	15
34. July 17, 1968	Correlation between 7-mode and USPHS 10-mode cycles—Clark.	General Motors	9
35. July 17, 1968	Schematic diagram—NO and O ₂ inst. console.	do.	1
36. July 17, 1968	Relative sensitivity—FID analyzer.	Chrysler	2
37. July 30, 1968	Measurement procedure—NO for cal. 1970.	EEMP	16
38. July 30, 1968	Background data for calculating NO _x for California.	Chrysler	3
39. July 30, 1968	Correlation program—HEW-AMA laboratories—Westveer.	EEMP	4
40. July 30, 1968	Report on reactivity to ESC from joint ACP and EEMP.	EEMP	6
41. Aug. 5, 1968	Report on measurement procedure for NO California—1970.	EEMP	15

See footnotes at end of table, p. 1695.

EXHAUST EMISSION MEASUREMENT PANEL REPORTS—CONTINUED

Date of presentation	Subject	Prepared by	Number of pages
42. Aug 11, 1968.....	Continuous trace—rate of exh. flow, 10-mode cycle.	Chrysler.....	3
43. Sep 11, 1968.....	Mass flow data—Fagley (7- versus 10-mode cycles).	do.....	14
44. Sep 11, 1968.....	Letter—Jensen to Maga—Mass emission measurement technique.	AMA.....	3
45. Sep 11, 1968.....	Table—Fuel measured mass compared with calculated Fed. Std. mass.	Chrysler.....	1
46. Sep 11, 1968.....	Repeatability of NO measurement technique—9 vehicles.	General Motors.....	6
47. Dec 3, 1968.....	Comments to ESC on Cal. Law AB 357—assembly line test.	EEMP.....	11
48. Jan 27, 1969.....	Report on NO _x humidity factor—Maeda.....	Nissan.....	16
49. Jan 27, 1969.....	EEMP to ESC report on Cal. ARB assembly line test.	EEMP.....	6
50. Feb. 5, 1969.....	European driving cycle—report by F. Louis.....	Renault.....	4
51. Feb. 18, 1969.....	Exhaust flow method of mass measurement—Fagley.	Chrysler.....	19
52. Feb. 18, 1969.....	Mass emission program—Mick.....	General Motors.....	3
53. Mar. 4, 1969.....	Comments on Calif. proposed assembly line test procedures.	Toyota.....	5
54. Mar. 18, 1969.....	Effect of moisture on NO _x emissions.....	Ethyl.....	24
55. Mar. 20, 1969.....	Effect of fuel composition—on FID/NDIR ratio—Campau.	Ford.....	11
56. Mar. 26, 1969.....	Reduction of NO _x —manifold reactor—Tanaka et al.	Nippon Denso.....	12
57. April 11, 1969.....	Exhaust emission measurement correlation program—Westveer.	EEMP.....	4
58. April 14, 1969.....	Supplement—moisture on NO _x —RK factor calculation.	Ethyl.....	2
59. April 21, 1969.....	Comments on foreign cycles—Lombardi.....	EEMP.....	3
60. April 30, 1969.....	HC measurement by FID—improved response—Teague.	ACP/EEMP.....	3
61. May 29, 1969.....	Diagrams of sampling and analytical systems—proposed.	EEMP.....	4
62. June 5, 1969.....	Effective and economic control of auto emissions—Sarto.	EVMP.....	7
63. July 1, 1969.....	Preliminary evaluation of NO _x analyzer—Jackson.	General Motors.....	3
64. do.....	Determination of CO ₂ at Wahnsdorf, Germany—published.	Mercedes-Benz.....	2
65. do.....	Comparison of 3 dynamometers in Germany.....	do.....	2
66. do.....	Dynamometer Effects on emissions using CVS.....	Nissan.....	2
67. July 23, 1969.....	Foreign cycle evaluation—Lombardi.....	EEMP.....	4

HEAVY VEHICLE PANEL REPORTS

1. Mar. 7, 1969.....	Evaluative control procedures for heavy trucks.	Heavy vehicle panel.....	4
2. Mar. 26, 1969.....	Reduction of nitrogen oxides in automobile exhaust.	Nippon Denso.....	11
3. May 22, 1969.....	Outline for research program for heavy vehicle emission data.	Heavy vehicle panel.....	2

AD HOC TRAFFIC SURVEY PANEL REPORTS

1. May 24, 1967.....	Comparison of Chrysler 50,000 mile and AMA durability schedules.	Chrysler Corp.....	4
2. May 24, 1967.....	Comparison of durability schedules.....	General Motors Corp.....	1
3. Mar. 27, 1968.....	Consideration in traffic survey and test cycle development.	General Motors Corp., Chrysler Corp., Ford Motor Co.....	3
4. Sept. 30, 1968.....	Background of vehicle exhaust gas test procedures in Japan.	Toyota Motor Co., Ltd.....	4
5. Feb. 5, 1969.....	European driving cycle.....	Renault.....	4

ATMOSPHERIC CHEMISTRY PANEL REPORTS

1. Mar. 4, 1969.....	Nitrogen oxides in the atmosphere.....	Atmospheric chemistry panel.....	34
2. July 8, 1969.....	HEW meeting, Cincinnati reactivity criteria.....	do.....	6

VEHICLE EMISSION SURVEILLANCE PANEL REPORTS

Date of presentation	Subject	Prepared by	Number of pages
1. Oct. 11, 1967	1967 surveillance program on high mileage exhaust emission equipped vehicles.	Ford Motor Co.	23
2. Mar. 27, 1969	Hot vs. cold start surveillance testing.	Vehicle Emission Surveillance Panel.	9
3. June 9, 1969	Surveillance data summary report to ESC.	do.	5

FUEL SYSTEMS EMISSION PANEL REPORTS

1. Oct. 18, 1967	Letter from AMA to NAPCA outlining available data on evaporation control systems.	AMA-VCP, General Motors.	10
2. Oct. 25, 1967	Charcoal canister evaporative emissions control system.	General Motors.	9
3. Do	Crankcase storage of evaporative emissions.	do.	10
4. Dec. 1, 1967	Carbon air cleaner evaporative control.	Ford.	10
5. Do	Crankcase storage system, evaporative control.	do.	15
6. Do	History of evaporative control studies.	do.	13
7. Jan. 1, 1968	Chrysler closed vent system.	Chrysler.	8
8. Do	AMC evaporative systems.	American Motors.	6
9. Apr. 24, 1968	Results of Lab Cross program.	Fuel Systems Emission Panel.	5
10. June 14, 1968	Evaporative loss data.	do.	⁵ 7
11. July 1968	Absorption of HC vapor by charcoal.	Toyota.	15
12. Aug. 23, 1968	Proposed test procedure for determination of liquid fuel losses from vehicle fuel tank.	Fuel Systems Emission Panel.	9
13. Sept. 27, 1968	do.	do.	8
14. Oct. 15, 1968	Joint (Fuel Systems Emission Panel and HVP) report to ESC on test procedure for heavy truck losses.	Fuel Systems Emission Panel.	4
15. Mar. 18, 1969	Preliminary progress report of shed test procedure.	do.	3
16. Mar. 24, 1969	Fuel temp vs. vapor temperature.	Kaiser Jeep.	2
17. Mar. 24, 1969	Comparison of evaporation test procedures.	Ford.	9
18. Mar. 24, 1969	GM test on effect of heating test on evaporation emission.	General Motors.	2
19. Mar. 25, 1969	Deterioration factor of evaporation emission data.	Toyota.	7
20. Apr. 8, 1969	Comparative shed tests.	General Motors.	⁵ 2
21. Apr. 18, 1969	Report of evaporation testing.	Ford, General Motors, Chrysler, American Motors.	7
22. Apr. 23, 1969	Effect of heating method of fuel tank on evaporation emission.	Nissan.	4
23. Apr. 23, 1969	Heating pad installation versus fuel tank emissions.	Kaiser Jeep.	3
24. Apr. 28, 1969	Review of shed testing data.	Ford, American Motors, Chrysler.	6
25. May 5, 1969	Fuel tank heating methods.	FSEP.	23
26. May 6, 1969	Laboratory cross-check program.	FSEP.	11
27. May 18, 1969	Shed test on control equipped cars.	General Motors.	2
28. July 1, 1969	Comparison of evaporation test sequences.	FSEP.	6
29. July 18, 1969	Proposals for engineering acceptance of evaporation control systems.	FSEP.	3

¹ Attachment A-5.² Attachment B-3.³ Attachment C-2.⁴ Attachment D-1.⁵ Charts.

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